

# SEARCH REQUEST FORM

# Scientific and Technical Information Center

Requester's Full Name: Mic	MAEL LEWIS	Examiner #: $80/9/$ Date: $9/25/27$ Serial Number: $9/352/37$
Art Unit: 2055 Phone	e Number 305 8 7 3	Serial Number: 09/352127
Location: 8050	Results Format Pr	referred (circle): PAPER DISK E-MAIL
If more than one search is sub	omitted, please priori	tize searches in order of need. ***************************
Include the elected species or structures	, keywords, synonyms, acr ns that may have a special i	be as specifically as possible the subject matter to be searched conyms, and registry numbers, and combine with the concept of meaning. Give examples or relevant citations, authors, etc., if and abstract.
Title of Invention: <u>Audibl</u>	le Error Defect	nno, Itanna J Mikkola, Jani
Inventors (please provide full names):	Janne Vai	pno, Hanna J Mikkola, Jani
Rotela-Pukkila	•	
Earliest Priority Filing Date:	June 7, 2000	
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Searcher Location: 4B33/3C03	Structure (#)	Questel/Orbit
Date Searcher Picked Up: 8-2	Bibliographie	Dr.Link
Date Completed: 8-3-04	Litigation	Lexis/Nexis
Searcher Prep & Review Time:	Fulltext	Sequence Systems
Clerical Prep Time:	Patent Family	WWW/Internet
	Other	Other (specify)
Online Time:	V = WI	

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      34:SciSearch(R) Cited Ref Sci 1990-2004/Jul W4
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      65: Inside Conferences 1993-2004/Aug W1
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         (c) 2002 The Gale Group
File 603: Newspaper Abstracts 1984-1988
         (c) 2001 ProQuest Info&Learning
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S18
             ERELAT? OR INTERRELAT?)
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             CONTINGEN? OR PREDICAT? OR CIRCUMSCRIB?)
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                S10(5N) (BASE OR BASED OR BASING OR SUBJECT?)
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         9360
                S21 AND S10
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S22
                S2:S8 AND S18:S20
           58
S23
                S2:S8 AND S14:S17(15N)S10
           74
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          122
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S25
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                S25 NOT S26
S27
           49
                RD (unique items)
$28
 28/7/1
            (Item 1 from file: 6)
                6:NTIS
DIALOG(R) File
(c) 2004 NTIS, Intl Cpyrght All Rights Res. All rts. reserv.
2154357 NTIS Accession Number: ADA372117/XAB
  Spread Spectrum Interference Mitigation with Variable Processing Gain
  (Final technical rept. Feb-Nov 98)
  Saulnier, G. J.; Ye, Z.
  Rensselaer Polytechnic Inst., Troy, NY.
  Corp. Source Codes: 024503000; 302100
  Report No.: AFRL-IF-RS-TR-1999-222
  Oct 1999
             115p
  Languages: English
  Journal Announcement: USGRDR0009
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located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
  NTIS Prices: PC A07/MF A02
  Country of Publication: United States
  Contract No.: F30602-98-1-0054; 2304; C8
  Designing a spread spectrum signal for the worst case channel conditions
can be wasteful of system resources such as bandwidth and network
throughput capacity. This report focuses on the performance of spread
spectrum system based on multi-carrier modulation, also known as Orthogonal
Frequency Division Multiplexing (OFDM), which provides variable processing
gain by adjusting the redundancy in the signal in response to the channel
   conditions . A signal structure based
                                                on OFDM is defined and a
technique for adapting the signal properties, including the data rate, in response to channel conditions and/or transmission requirements, is
developed. Analytical and simulation results demonstrate that the signaling
format can maintain a desired error rate performance over a wide range of
channel conditions. The report also considers the impact of this variable
signaling scheme on the upper layers of the network and, in particular, the
data link layer. Classic throughput analysis for fixed and random access
schemes is extended for this proposed adaptive packet radio network. The
focus in on pure-ALOHA and non-persistent CSMA (NP-CSMA) systems. A large
improvement in throughput is demonstrated for the adaptive system, as
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compared to a conventional fixed rate system, for various mobile user population profiles and radio propagation path loss models.

28/7/2 (Item 2 from file: 6)

DIALOG(R) File 6:NTIS

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0627698 NTIS Accession Number: AD-484 008/8/XAB

### Adaptive Noise Minimizer

(Final rept)

Communication Systems Inc Paramus N J

Corp. Source Codes: 092975

Report No.: CSI-66-TR-1018; RADC-TR-66-179

May 66 81p

Journal Announcement: GRAI7714

Distribution limitation now removed. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A05/MF A01

Contract No.: AF 30(602)-3803; AF-4519; 451908

This report describes and evaluates equipment capable of adaptively modifying the modulation index of a troposcatter link to continuously optimize the receiver signal-to-noise ratio. An examination into the theory of noise in communications channels led to certain novel design objectives. Equipment was evolved to implement these concepts and explore possible modes of operation. Tests on the RADC Caribbean Test Bed showed that the sensing mode known as TAGGING was the most successful, with resultant digital error rates showing improvement factors varying from 2 to 10, depending on path conditions. This program has shown that the Adaptive Modulation Index technique is a feasible and practical approach for improving the error rate in a tropo FDM/FM system. System performance can now be significantly improved without the need for resorting to costly and complex brute force methods. (Author)

### 28/7/3 (Item 3 from file: 6)

DIALOG(R) File 6:NTIS

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0186005 NTIS Accession Number: AD-484 008/XAB

### Adaptive Noise Minimizer

(Final rept)

Communications and Systems Inc., Paramus, N.J.

Corp. Source Codes: 403477

Report No.: C/S-66-TR-1018; RADC-TR-66-179

May 66 81p

Journal Announcement: USGRDR6919

Distribution Limitation now Removed.

Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A05/MF A01

Contract No.: AF 30(602)-3803; AF-4519; 451908

The report describes and evaluates equipment capable of adaptively modifying the modulation index of a troposcatter link to continuously optimize the receiver signal-to-noise ratio. An examination into the theory of noise in communications channels led to certain novel design objectives. Equipment was evolved to implement these concepts and explore possible

à

modes of operation. Tests on the RADC caribbean test bed showed that the sensing mode known as tagging was the most successful, with resultant digital error rates showing improvement factors varying from 2 to 10, depending on path conditions. This program has shown that the adaptive modulation index technique is a feasible and practical approach for improving the error rate in a Tropo FDM/FM system. System performance can now be significantly improved without the need for resorting to costly and complex brute force methods. (Author)

# 28/7/4 (Item 1 from file: 2) DIALOG(R)File 2:INSPEC (c) 2004 Institution of Electrical Engineers. All rts. reserv. 6946339 INSPEC Abstract Number: B2001-07-6120B-119 Title: Progressive source coding combined with regressive channel coding on varying channels Author(s): Hagenauer, J.; Stockhammer, T.; Weiss, C.; Donner, A. Author Affiliation: Inst. for Commun. Technol., Tech. Univ. Munchen, Germany Journal: ITG-Fachbericht Conference Title: ITG-Fachber. (Germany) no.159 p.123-30 Publisher: VDE-Verlag,

Publication Date: 2000 Country of Publication: Germany CODEN: ITGFEY ISSN: 0932-6022

SICI: 0932-6022(2000)159L.123:PSCC;1-H

Material Identity Number: G434-2001-002

Conference Title: 3rd ITG Conference Source and Channel Coding

Conference Sponsor: Informationstechnische Gesellschaft im VDE (ITG); IEEE Inf. Theory Soc. (IT); et al

Conference Date: 17-19 Jan. 2000 Conference Location: Munich, Germany Language: English Document Type: Conference Paper (PA); Journal Paper (JP)

Treatment: Practical (P); Theoretical (T)

Abstract: A channel coding system for heavily varying channels (mobile unknown to the encoder is presented. It matches Internet) progressively coded sources (e.g., video, images, audio, speech) with convolutional codes (CCs) of very high memory applying regressive redundancy over the data frame of the source. The channel decoder with scalable complexity and delay employs modified sequential decoding. The decoder uses a new algorithm, the "far end error decoder (FEED)" which, in a change of paradigm, does not aim at low error rate, but rather tries to decode an error-free part from the beginning of the frame as far out as possible under the actual channel conditions. We determine the error-free region of the frame which means that for progressively coded sources we achieve the best reconstruction quality possible. The decoding method is and unknown channel conditions self-adaptive to varying (interference, fading, packet loss) and provides graceful degradation. Results with SPIHT coded images show performances better than previous known FEC schemes. Potentials for further improvements of this scheme are discussed. (16 Refs)

Subfile: B Copyright 2001, IEE

### 28/7/5 (Item 2 from file: 2)

DIALOG(R) File 2: INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

6887239 INSPEC Abstract Number: B2001-05-6150E-019

Title: Simple blind beamforming algorithms based on power maximization for

DSSS CDMA systems

Author(s): Kyungwhoon Cheun; Youhan Kim

Author Affiliation: Dept. of Electron. & Electr. Eng., Pohang Inst. of Sci. & Technol., South Korea

Conference Title: 10th International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC'99). Proceedings Part vol.2 p. 684-90 vol.2

Publisher: Osaka Univ, Odsaka, Japan

Publication Date: 1999 Country of Publication: Japan 3 vol. xxiii+1560 pp.

Material Identity Number: XX-2000-03072

Conference Title: Proceedings of PIMRC'99: International Symposium on Personal and Indoor Mobile Radio Communications

Conference Date: 12-15 Sept. 1999 Conference Location: Osaka, Japan

Language: English Document Type: Conference Paper (PA)

Treatment: Theoretical (T)

Abstract: Four very simple blind beamforming algorithms intended for use in direct-sequence spread-spectrum CDMA systems and based on maximization of the power of the beamformer output are derived. Three of them are signed versions of a base algorithm. Steady-state values of the norm of the output and the beamformer weight vector under noiseless beamformer conditions are derived which reveal some very interesting properties of the algorithms. The derived algorithms show very fast convergence rates and are extremely simple, and two of them do not require any multiplication operations 'for weight updates. Also, the algorithms are shown to be quite insensitive to the particular selection of the involved step sizes, thus easing beamformer design in time- varying channel conditions . Extensive computer simulations have been performed to verify the usefulness of the algorithms. (12 Refs)

Subfile: B

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### 28/7/6 (Item 3 from file: 2)

DIALOG(R) File 2: INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

6868324 INSPEC Abstract Number: B2001-04-6135C-074, C2001-04-5260D-042
Title: Adaptive optimal intra-update for lossy video transmission

Author(s): Stuhlmuller, K.W.; Farber, N.; Girod, B.

Author Affiliation: Telecommun. Lab., Erlangen-Nurnberg Univ., Germany Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA) vol.4067, pt.1-3 p.286-95

Publisher: SPIE-Int. Soc. Opt. Eng,

Publication Date: 2000 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

SICI: 0277-786X(2000)4067:1/3L.286:AOIU;1-Z

Material Identity Number: C574-2000-219

U.S. Copyright Clearance Center Code: 0277-786X/2000/\$15.00

Conference Title: Visual Communications and Image Processing 2000

Conference Sponsor: SPIE; Univ. Western Australia; Inst.. Eng. Australia;

Soc. Imaging Scu, & Technol.; IEEE

Conference Date: 20-23 June 2000 Conference Location: Perth, WA, Australia

Language: English Document Type: Conference Paper (PA); Journal Paper (JP)

Treatment: Theoretical (T); Experimental (X)

Abstract: An adaptive algorithm to adjust the intra-update rate of a video encoder is presented. As optimization criterion, the PSNR at the decoder after lossy transmission is used. Based on a model for the video

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encoder and error propagation at the video decoder the optimal intra-rate can be calculated for a given transmission channel analytically. It is shown how the parameters of these models can be measured adaptively during encoding. Thus, the intra-rate can be adjusted to changing channel conditions and sequence statistics. It is shown that a practical robust system can be built with the presented algorithm. (8 Refs)

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28/7/7 (Item 4 from file: 2)

DIALOG(R) File 2:INSPEC

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6790519 INSPEC Abstract Number: B2001-02-6135C-030

Title: Reliable video transmission over fading channels via channel state estimation

Author(s): Kumwilaisak, W.; Jong Won Kim; Kuo, C.-C.J.

Author Affiliation: Dept. of Electr. Eng. Syst., Univ. of Southern California, Los Angeles, CA, USA

Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA) vol.3974 p.336-46

Publisher: SPIE-Int. Soc. Opt. Eng,

Publication Date: 2000 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

SICI: 0277-786X(2000)3974L.336:RVTO;1-I

Material Identity Number: C574-2000-114

U.S. Copyright Clearance Center Code: 0277-786X/2000/\$15.00

Conference Title: Image and Video Communications and Processing 2000

Conference Sponsor: SPIE; Soc. Imaging Sci. & Technol

Conference Date: 25-28 Jan. 2000 Conference Location: San Jose, CA, USA

Language: English Document Type: Conference Paper (PA); Journal Paper (JP)

Treatment: Theoretical (T)

media such as video over of continuous Transmission time-varying wireless communication channels can benefit from the use of adaptation techniques in both source and channel coding. An adaptive feedback-based wireless video transmission scheme is investigated in this research with special emphasis on feedback-based adaptation. To be more specific, an interactive adaptive transmission scheme is developed by letting the receiver estimate the channel state information and send it back to the transmitter. By utilizing the feedback information, the transmitter is capable of adapting the level of protection by changing the flexible RCPC (rate-compatible punctured convolutional) code ratio on the instantaneous channel condition . The wireless depending channel is modeled as a fading channel, where the long-term and short-term fading effects are modeled as the log-normal fading and the Rayleigh flat fading, respectively. Then, its state (mainly the long-term fading portion) is tracked and predicted by using an adaptive LMS (least mean squares) algorithm. By utilizing the delayed feedback on the channel condition, the adaptation performance of the proposed scheme is first evaluated in terms of the error probability and the throughput. It is then extended to incorporate variable size packets of ITU-T H.263+ video with the error resilience option. Finally, the end-to-end performance of wireless video transmission is compared against several non-adaptive protection schemes. (11 Refs)

Subfile: B

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28/7/9 (Item 6 from file: 2)

DIALOG(R) File 2: INSPEC

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6345236 INSPEC Abstract Number: B1999-10-6150-017

Title: A wideband radio channel model for simulation of chaotic communication systems

Author(s): Ruttik, K.; Honkanen, P.; Hall, M.; Korhonen, T.; Porra, V. Author Affiliation: Inst. of Radio Commun., Helsinki Univ. of Technol., Espoo, Finland

Conference Title: ECCTD '97. Proceedings of the 1997 European Conference on Circuit Theory and Design Part vol.1 p.302-5 vol.1

Publisher: Tech. Univ. Budapest, Budapest, Hungary

Publication Date: 1997 Country of Publication: Hungary 3 vol. (xx+xxi+xx+1572) pp.

Material Identity Number: XX-1997-02982

Conference Title: Proceedings of 1997 European Conference on Circuit Theory and Design (ECCTD'97)

Conference Sponsor: IEEE Circuit & Syst. Soc.; Tech. Univ. Budapest; Hungarian Acad. Sci.; et al

Conference Date: 31 Aug.-3 Sept. 1997 Conference Location: Budapest, Hungary

Language: English Document Type: Conference Paper (PA)

Treatment: Theoretical (T)

Abstract: A general purpose wideband radio channel model implemented in MATLAB has been designed specifically for testing the performance of wideband chaotic communication systems utilising a radio interface. The theoretical basis of the model is presented in the paper, as well as a short description of the MATLAB program and some illustrative examples of the output signal under given input signal and channel conditions. The channel model is based on a number of time-varying taps modelling the signal dispersion in a multipath environment. Generation of the tap fading process is implemented using a novel method based on summation of a number of complex phasors. (3 Refs)

Subfile: B

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### 28/7/10 (Item 7 from file: 2)

DIALOG(R) File 2:INSPEC

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6237619 INSPEC Abstract Number: B1999-06-6120-005

Title: Differential detection PSK using IIR filter for improving detection performance

Author(s): Hamamoto, N.; Hashimoto, Y.; Ide, T.; Sakasai, M.; Tejima, T.; Matsumoto, Y.

Journal: Review of the Communications Research Laboratory vol.44, no.1-2 p.47-58

Publisher: Minist. Post Telecommun,

Publication Date: March-June 1998 Country of Publication: Japan

CODEN: TSKKED ISSN: 0914-9279

SICI: 0914-9279(199803/06)44:1/2L.47:DDUF;1-N

Material Identity Number: M745-1999-001

Language: Japanese Document Type: Journal Paper (JP)

Treatment: Practical (P); Theoretical (T)

Abstract: This paper presents a method for improving the performance of the differential detection of differentially encoded phase shift keying (DPSK). The structure of the proposed detection scheme consists of a conventional differential detection circuit equipped with an infinite impulse response (IIR) filter, combined with decision feedback. The results of theoretical analysis and computer simulation show that performance of the proposed detection method can approach that of coherent detection of DPSK under additive white Gaussian noise conditions with no increase in architectural complexity. Furthermore, the proposed detector has the ability to optimize performance under conditions of static or fading. An adaptive scheme suitable for time- varying Rician fading channel conditions is presented, and performance results obtained by computer simulation are given. (11 Refs)

Subfile: B

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### 28/7/11 (Item 8 from file: 2)

DIALOG(R) File 2: INSPEC

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6188056 INSPEC Abstract Number: B1999-04-6120-029

Title: Adaptive reduced state-transition Viterbi differential detection of M-ary DPSK signals transmitted over Gaussian and frequency-nonselective Rayleigh faded channels

Author(s): Adachi, F.

Author Affiliation: Wireless Lab., NTT Mobile Commun. Inc., Yokosuka, Japan

Journal: IEICE Transactions on Communications vol.E82-B, no.1 p. 156-64

Publisher: Inst. Electron. Inf. & Commun. Eng,

Publication Date: Jan. 1999 Country of Publication: Japan

CODEN: ITCMEZ ISSN: 0916-8516

SICI: 0916-8516(199901)E82B:1L.156:ARST;1-I

Material Identity Number: P711-1999-002

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: Adaptive maximum likelihood differential detection implemented by a reduced state-transition Viterbi algorithm (called adaptive 3-state RSTVDD) is presented for adaptive reception of M-ary differential phase shift keying (DPSK) signals transmitted over additive white Gaussian noise (AWGN) and frequency-nonselective Rayleigh fading channels. The adaptive RSTVDD comprises 1DD, a differential encoder, and reverse 3-state modulator, followed by reduced-state (3-state) Viterbi DD (RSVDD) with adaptive phase reference estimation. The adaptive 3-state RSVDD detector estimates the sequence of phase errors of the 1DD output. The phase reference estimator is an adaptive least mean square (LMS) filter with a channel conditions . The final step-size that adapts to changing detected symbol sequence is the modulo-2 pi sum of the 1DD output phase sequence and the detected phase error sequence. The bit error rate (BER) performance of M-ary DPSK, M=4, 8, and 16, in the AWGN and Rayleigh fading channels is evaluated by computer simulation to show that adaptive 3-state RSTVDD can achieve almost the same BER performance as the previously developed adaptive M-state RSVDD. Since the number of trellis states is reduced to three irrespective of M, the adaptive 3-state RSTVDD has lower computation complexity and it is particularly useful for M-ary DPSK with (21 Refs) M>or=8.

Subfile: B

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### 28/7/12 (Item 9 from file: 2)

DIALOG(R) File 2: INSPEC

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6103193 INSPEC Abstract Number: B9901-6250-037

Title: Reconfigurable adaptive RAKE receiver for wideband CDMA systems

Author(s): Latva-aho, M.; Juntti, M.; Oppermann, I.

Author Affiliation: Centre for Wireless Commun., Oulu Univ., Finland Conference Title: VTC '98. 48th IEEE Vehicular Technology Conference. Pathway to a Global Wireless Revolution (Cat. No.98CH36151) Part vol.3 p.1740-4 vol.3

Publisher: IEEE, New York, NY, USA

Publication Date: 1998 Country of Publication: USA 3 vol. (xlviii+xliv+2598) pp.

ISBN: 0 7803 4320 4 Material Identity Number: XX98-01713 U.S. Copyright Clearance Center Code: 0 7803 4320 4/98/\$10.00

Conference Title: VTC '98. 48th IEEE Vehicular Technology Conference. Pathway to a Global Wireless Revolution

Conference Sponsor: IEEE Vehicular Technol. Soc.; IEEE Canada; IEEE Ottawa Sect

Conference Date: 18-21 May 1998 Conference Location: Ottawa, Ont., Canada

Language: English Document Type: Conference Paper (PA)

Treatment: Theoretical (T)

Abstract: Conventional RAKE receiver is near-far limited in code-division multiple-access (CDMA) systems. Linear minimum mean squared error (LMMSE) criterion can be used to obtain near-far resistant single-user receivers. Depending on the optimization criterion different adaptive receivers are obtained. A novel adaptive LMMSE-RAKE receiver based on two different LMMSE criteria is presented. The receiver combines the conventional RAKE receiver and single-user LMMSE receivers. Depending on a quality indicator the receiver switches itself to different modes depending on the radio channel conditions. According to the simulation results the novel receiver concept remarkably improves the performance of the conventional RAKE receivers under various channel conditions and data rates. (7 Refs) Subfile: B

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### 28/7/13 (Item 10 from file: 2)

DIALOG(R) File 2: INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

6072760 INSPEC Abstract Number: B9812-6250-019

Title: Cramer-Rao bounds in the parametric estimation of fading radiotransmission channels

Author(s): Gini, F.; Luise, M.; Reggiannini, R.

Author Affiliation: Dipt. di Ingegneria della Inf., Pisa Univ., Italy Journal: IEEE Transactions on Communications vol.46, no.10 p.1390-8 Publisher: IEEE,

Publication Date: Oct. 1998 Country of Publication: USA

CODEN: IECMBT ISSN: 0090-6778

SICI: 0090-6778(199810)46:10L.1390:CBPE;1-U

Material Identity Number: I203-98011

U.S. Copyright Clearance Center Code: 0090-6778/98/\$10.00

Document Number: S0090-6778(98)07765-4

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: The context of this paper is parameter estimation for linearly modulated digital data signals observed on a frequency-flat time-selective fading channel affected by additive white Gaussian noise. The aim is the derivation of Cramer-Rao lower bounds for the joint estimation of all those channel parameters that impact signal detection, namely, carrier phase, carrier frequency offset (Doppler shift), frequency rate of change

(Doppler rate), **signal** amplitude, fading power, and Gaussian noise power. Time-selective frequency-flat fading is modeled as a low-pass autoregressive multiplicative distortion process. In particular, the important case of "slow" fading, with the multiplicative process remaining constant over the whole data burst, is specifically discussed. Asymptotic expressions of the bounds, valid for a large observed sample or for high signal-to-noise ratio (SNR), are also derived in closed form. A few charts with numerical results are finally reported to highlight the **dependence** of the bounds on **channel status** (SNR, fading bandwidth, etc.). (21 Refs)

Subfile: B

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### 28/7/14 (Item 11 from file: 2)

DIALOG(R) File 2: INSPEC

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6023074 INSPEC Abstract Number: B9810-6140C-618

Title: Adaptive rate-controlled, robust video communication over packet wireless networks

Author(s): Rajugopal, G.R.; Hafez, R.H.M.

Author Affiliation: ShareWave Inc., El Dorado Hills, CA, USA

Journal: Mobile Networks and Applications vol.3, no.1 p.33-47

Publisher: Baltzer; ACM Press,

Publication Date: 1998 Country of Publication: Netherlands

CODEN: JSTAFL ISSN: 1383-469X

SICI: 1383-469X(1998)3:1L.33:ARCR;1-H Material Identity Number: G269-98003

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P); Experimental (X)

Abstract: Video transmission over wireless packet networks is gaining importance due to the concept of universal personal communication. Further, it is considered an important step towards wireless multimedia. The challenge however is to achieve good video quality over mobile channels, where typically the channel conditions vary due to signal fading. Hence this paper investigates adaptive rate-controlled video transmission for robust video communication under a packet wireless environment. A combination of a mobile and an ATM backbone network is assumed in this work. An error-resilient design for the video coder, as proposed by Rajugopal et al., (1996), is employed here. This video coder comprises wavelet transform (WT), multi-resolution motion estimation (MRME) and a robust design for zero tree quantization. Two configurations, one employing MRME and the other using 1D-WT for temporal analysis, are considered for the video coder. Adaptive dynamic rate control is required to adapt the video communication to the channel conditions. It provides more channel protection when the channel is severe and improves the source rate and hence the performance when the conditions are favorable. An algorithm for dynamic rate control under varying channel conditions is proposed. It is evaluated under narrowband and broadband channel conditions . From the results, it is concluded that the dynamic rate control is very effective in optimizing the quality under varying mobile channel conditions . It is observed that the dynamic rate control provides at least an acceptable video quality under severe channel conditions and a good video quality when the channel conditions are favorable. (21 Refs) Subfile: B

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2:INSPEC DIALOG(R)File (c) 2004 Institution of Electrical Engineers. All rts. reserv. INSPEC Abstract Number: B9810-6120-001 Title: Adaptive differential detection using linear prediction for M-ary DPSK Author(s): Adachi, F. Author Affiliation: R&D Dept., NTT Mobile Commun. Network Inc., Kanagawa, Journal: IEEE Transactions on Vehicular Technology vol.47, no.3 909-18 Publisher: IEEE, Publication Date: Aug. 1998 Country of Publication: USA CODEN: ITVTAB ISSN: 0018-9545 SICI: 0018-9545(199808)47:3L.909:ADDU;1-C Material Identity Number: I112-98003 U.S. Copyright Clearance Center Code: 0018-9545/98/\$10.00 Document Number: S0018-9545(98)02482-7 Language: English Document Type: Journal Paper (JP) Treatment: Theoretical (T) This paper proposes a novel adaptive differential detection (adaptive DD), which can significantly reduce the irreducible bit-error rate (BER) of M-ary DPSK due to Doppler spread by the adaptive linear prediction of the reference signal. The predictor coefficient is adapted to changing channel conditions by using the recursive least-square (RLS) algorithm. A phase sequence estimation based on the M-state Viterbi algorithm (VA) and another based on the decision feedback algorithm (DFA) are presented. A theoretical BER analysis is presented for adaptive DD-DFA. BER performances of 2 and 4DPSK in Rayleigh fading channels are evaluated by computer simulations. When the RLS forgetting factor of beta =1 is used, simulation results show that the irreducible BER of 4DPSK can be reduced to  $7.2*10/\sup -5/(3.9*10/\sup -4/)$  for VA (DFA) while conventional DD offers 3.9\*10/sup -3/ when f/sub D/T/sub b/ (maximum Doppler frequency times bit duration)=0.01 and average E/sub b//N/sub 0/ (signal energy per bit-to-additive white Gaussian noise (AWGN) power spectrum density ratio)=60 dB, where most errors are produced by Doppler spread. Adaptive DD is also effective in AWGN channels-simulations show that for the case of 4DPSK, a performance gain of 1.2 (0.7) dB is achieved over conventional DD for VA (DFA) at BER=10/sup -3/. (11 Refs) Subfile: B Copyright 1998, IEE (Item 14 from file: 2) 28/7/17 2: INSPEC DIALOG(R) File (c) 2004 Institution of Electrical Engineers. All rts. reserv. INSPEC Abstract Number: B9610-6120-013 performance Author(s): Hamamoto, N. Tokyo, Japan vol.44, no.8

Title: Differential detection with IIR filter for improving DPSK detection Author Affiliation: Commun. Res. Lab., Minist. of Posts & Telecommun., Journal: IEEE Transactions on Communications p.959-66 Publisher: IEEE, Publication Date: Aug. 1996 Country of Publication: USA CODEN: IECMBT ISSN: 0090-6778 SICI: 0090-6778(199608)44:8L.959:DDWF;1-8 Material Identity Number: I203-96009 U.S. Copyright Clearance Center Code: 0090-6778/96/\$05.00 Document Number: S0090-6778(96)05494-3

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: This paper presents a method for improving the performance of differential detection of differentially encoded phase shift keying (DPSK). The structure of the proposed detection scheme consists of a conventional differential detection circuit equipped with an infinite impulse response (IIR) filter combined with decision feedback. The results of theoretical analysis and computer simulation show that performance of the proposed detection method can approach that of coherent detection of DPSK under additive white Gaussian noise (AWGN) conditions without any increase in architectural complexity. Furthermore, a parameter of the proposed detector can be varied to optimize performance for static or fading conditions. An adaptive scheme suitable for time varying Rician-fading channel conditions is presented, and performance results obtained by computer simulation are given. (6 Refs)

Subfile: B

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### 28/7/18 (Item 15 from file: 2)

DIALOG(R) File 2: INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

5330702 INSPEC Abstract Number: B9609-6140C-206

Title: Robust image communication using subband coding and multilevel modulation

Author(s): Lervik, J.M.; Ramstad, T.A.

Author Affiliation: Dept. of Telecommun., Norwegian Inst. of Technol., Trondheim, Norway

Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA) vol.2727, pt.2 p.524-35

Publisher: SPIE-Int. Soc. Opt. Eng,

Publication Date: 1996 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

SICI: 0277-786X(1996)2727:2L.524:RICU;1-5

Material Identity Number: C574-96091

U.S. Copyright Clearance Center Code: 0 8194 2103 0/96/\$6.00

Conference Title: Visual Communications and Image Processing '96

Conference Sponsor: SPIE; IEEE

Conference Date: 17-20 March 1996 Conference Location: Orlando, FL, USA

Language: English Document Type: Conference Paper (PA); Journal Paper (JP)

Treatment: Practical (P); Theoretical (T)

Abstract: Visual communication systems can exploit the advantages of analog transmission and digital compression: analog transmission allows the quality of the recovered data to vary gracefully as the vary , whereas digital compression allows for powerful data conditions a system optimized for bandwidth and reduction. paper, In this power-limited channels which combines analog and digital communication principles is proposed. The system achieves a high bandwidth compression efficiency by combining subband signal decomposition and dynamic bandwidth allocation with 81-PAM transmission. Furthermore, graceful degradation is obtained by finding mappings from the subband samples to the channel space which minimize the impact of channel errors in the reconstructed The optimized mapping system outperforms a conventional system using random mappings. In addition, it is shown that the proposed system performs better, in a rate-distortion sense for a given channel signal-to-noise ratio, than a similar subband system using conventional bit allocation,

optimized mappings, and 64-PAM. A novel definition for measuring system efficiency, based on comparisons to pure analog PAM transmission, is used to evaluate the proposed system. The ideas presented in this paper can be used for future terrestrial TV broadcasting and mobile communication systems. (18 Refs)

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### 28/7/19 (Item 16 from file: 2)

DIALOG(R) File 2: INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

5318198 INSPEC Abstract Number: B9608-6120B-067

Title: Adaptive quantization for fading channels with feedback

Author(s): Amanullah, A.S.; Salehi, M.

Author Affiliation: Dept. of Electr. & Comput. Eng., Northeastern Univ., Boston, MA, USA

Journal: International Journal of Wireless Information Networks vol.2, no.2 p.83-90

Publisher: Plenum,

Publication Date: April 1995 Country of Publication: USA

CODEN: IJWNEY ISSN: 1068-9605

SICI: 1068-9605(199504)2:2L.83:AQFC;1-F Material Identity Number: C424-96002

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: The effect of the presence of a feedback channel on the transmission of information was first considered by Shannon (1956), who showed that the capacity of a memoryless channel is not increased by the existence of a feedback link even if the feedback link is noiseless. Later it was shown that the information on a feedback channel can be used to improve considerably the performance of channel coding. In this work we study the transmission of an information source through a fading channel with feedback, modeled by a finite-state channel in the Gilbert-Elliot sense. We show that by employing the feedback information in the quantizer design for this finite-state channel, one can achieve lower overall distortion compared to the case where feedback is not available. The feedback channel is used to estimate the channel state using a hidden Markov model, and a quantizer matched to the channel state is chosen based on this information. (12 Refs)

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### 28/7/20 (Item 17 from file: 2)

DIALOG(R) File 2: INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

5251387 INSPEC Abstract Number: B9606-6120-008

# Title: Upper bound performance of adaptive modulation in a slow Rayleigh fading channel

Author(s): Torrance, J.M.; Hanzo, L.

Author Affiliation: Dept. of Electron. & Comput. Sci., Southampton Univ.,

Journal: Electronics Letters vol.32, no.8 p.718-19

Publisher: IEE,

Publication Date: 11 April 1996 Country of Publication: UK

CODEN: ELLEAK ISSN: 0013-5194

SICI: 0013-5194(19960411)32:8L.718:UBPA;1-H

Material Identity Number: E089-96008

U.S. Copyright Clearance Center Code: 0013-5194/96/\$10.00 Language: English Document Type: Journal Paper (JP) Treatment: Theoretical (T)

Abstract: The upper bound bit error rate (BER) performance of a time division duplex (TDD) system, where the number of modulation levels is adapted on a very short term basis, depending upon the channels conditions, is derived and solved by numerical integration. The performance shows very close correspondence with simulated results. (4 Refs)

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### 28/7/21 (Item 18 from file: 2)

DIALOG(R)File 2:INSPEC

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5227060 INSPEC Abstract Number: B9605-6120-015

Title: Adaptive differential detection for M-ary DPSK

Author(s): Adachi, F.

Author Affiliation: R&D Dept., NTT Mobile Commun. Network Inc., Kanagawa, Japan

Journal: IEE Proceedings-Communications vol.143, no.1 p.21-8

Publisher: IEE,

Publication Date: Feb. 1996 Country of Publication: UK

CODEN: IPCOED ISSN: 1350-2425

SICI: 1350-2425(199602)143:1L.21:ADDD;1-0

Material Identity Number: B496-96001

U.S. Copyright Clearance Center Code: 1350-2425/96/\$10.00 Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: The adaptive differential detection (adaptive DD) of M-ary DPSK signals is proposed in which the phase reference for differential detection is estimated using the least mean square algorithm with step size optimally conditions . The Viterbi algorithm and changing channel adapted to decision feedback algorithm are applied to effectively perform the maximum likelihood detection of the transmitted phase sequence. The bit error rate (BER) performance of adaptive DD is evaluated by computer simulations of 4DPSK in additive Gaussian noise (AWGN) and Rayleigh fading channels. In AWGN channels, BER performance close to that of coherent detection with differential decoding is achieved with performance loss of only 0.3 dB. In Rayleigh fading, the irreducible BER owing to fading Doppler spread can be reduced almost by half compared with conventional DD without prior knowledge of fading statistics. (25 Refs)

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### 28/7/22 (Item 19 from file: 2)

DIALOG(R) File 2: INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

4910124 INSPEC Abstract Number: B9505-6220M-002

Title: A codec candidate for the GSM half rate speech channel

Author(s): Muller, J.-M.; Wachter, B.

Author Affiliation: ANT Nachrichtentech. GmbH, Backnang, Germany

Part vol.1 p.I/257-60 vol.1

Publisher: IEEE, New York, NY, USA

Publication Date: 1994 Country of Publication: USA 6 vol. 3382 pp.

ISBN: 0 7803 1775 0

U.S. Copyright Clearance Center Code: 0 7803 1775 0/94/\$3.00

Conference Title: Proceedings of ICASSP '94. IEEE International Conference on Acoustics, Speech and Signal Processing

Conference Sponsor: IEEE Signal Process. Soc

Conference Date: 19-22 April 1994 Conference Location: Adelaide, SA, Australia

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: The ANT approach for the standardisation of the GSM half rate codec is presented. The speech codec uses efficient scalar LSP quantization, joint optimization of adaptive and fixed codebook signals and works in two modes using different bit rates (5.7 and 6.15 kbit/s). The advantage of this dual mode scheme is an increase of the average error robustness without degradation of the intrinsic speech quality. The channel codec is based on rate compatible punctured codes. The channel decoder generates soft information for each decoded information bit. Bad frame detection is exclusively based on the exploitation of soft decision information. The use of error concealment at parameter level in the channel decoder as well as at signal level in the speech decoder is discussed. The complexity of speech and channel codec is 3.8 times the GSM full rate codec complexity. Subjective tests showed that the average Q-value of all test conditions is 1.7 db below the average GSM full rate Q-value. (8 Refs)

Subfile: B

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PLEASE ENTER A COMMAND OR BE LOGGED OFF IN 5 MINUTES ? t28/7/25-26,30-35

### 28/7/25 (Item 22 from file: 2)

DIALOG(R) File 2: INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

04149292 INSPEC Abstract Number: B9206-6140-247, C9206-7410F-051

Title: Performance evaluation of self-organizing map based neutral equalizers in dynamic discrete-signal detection

Author(s): Kohonen, T.; Raivio, K.; Simula, O.; Henriksson, J.

Author Affiliation: Helsinki Univ. of Technol., Lab. of Comput. & Inf. Sci., Espoo, Finland

Conference Title: Artificial Neural Networks. Proceedings of the 1991 International Conference. ICANN-91 p.1677-80 vol.2

Editor(s): Kohonen, T.; Makisara, K.; Simula, O.; Kangas, J.

Publisher: North-Holland, Amsterdam, Netherlands

Publication Date: 1991 Country of Publication: Netherlands 2 vol. xix+1819 pp.

ISBN: 0 444 89178 1

Conference Date: 24-28 June 1991 Conference Location: Espoo, Finland Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: Novel equalizer structures utilizing neural computation have recently been developed for adaptive discrete-signal detection. The equalizer structures combine the traditional transversal equalizer and the self-organizing map algorithm in parallel or cascade. Extensive simulations have been run to investigate different parameter effects using a two-path channel model and 16-QAM (quadrature amplitude modulation). The results have shown that the neural equalizer adapts very well to changing channel conditions, including both linear multipath and nonlinear distortions. Especially in difficult channels, the new structures are superior when compared with the traditional equalizers. The computational complexities of the combined structures are not significantly higher when compared to the practical linear equalizers. (5 Refs)

Subfile: B C

28/7/26 (Item 23 from file: 2)

DIALOG(R) File 2: INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

04051673 INSPEC Abstract Number: B9202-1290-008, C9202-5190-018

Title: Improving design feedback equaliser performance using neural networks

Author(s): Raivio, K.; Simula, O.; Henriksson, J.

Author Affiliation: Lab. of Comput. & Inf. Sci., Helsinki Univ. of Technol., Espoo, Finland

Journal: Electronics Letters vol.27, no.23 p.2151-3 Publication Date: 7 Nov. 1991 Country of Publication: UK

CODEN: ELLEAK ISSN: 0013-5194

U.S. Copyright Clearance Center Code: 0013-5194/91/\$3.00+0.00

Language: English Document Type: Journal Paper (JP)

Treatment: Applications (A); Experimental (X)

Abstract: Novel equaliser structures combining traditional transversal equalisers and neural computation have been introduced for adaptive discrete-signal detection. Extensive simulations using a two-path channel model and 16QAM modulation have been run to investigate the performance characteristics of these neural equalisers. The results have shown that they adapt very well to changing channel conditions, including both linear multipath and nonlinear distortions. The new structures are superior when compared to the traditional equalisers with equal computational complexity, especially in difficult channels. (7 Refs) Subfile: B C

### 28/7/30 (Item 1 from file: 8)

DIALOG(R) File 8:Ei Compendex(R)

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06335251 E.I. No: EIP03137412409

# Title: Analyzing the performance of the space-time block codes with partial channel state feedback

Author: Sharma, Naresh; Geraniotis, Evaggelos

Corporate Source: Dept. Elec. Eng. Inst. Syst. Res. University of Maryland, College Park, MD 20742, United States

Conference Title: 2000 IEEE Wireless Communications and Networking Conference

Conference Location: Chicago, IL, United States Conference Date: 20000923-20000928

Sponsor: IEEE Communications Society

E.I. Conference No.: 60535

Source: 2000 IEEE Wireless Communications and Networking Conference 2000. (IEEE cat n 00TH8540)

Publication Year: 2000

ISBN: 0780365968 Language: English

Document Type: CA; (Conference Article) Treatment: T; (Theoretical); X; (Experimental)

Journal Announcement: 0303W5

Abstract: The theory of space-time codes for multiple antennas at the transmitter and receiver provided a useful framework for minimizing the probability of pair-wise frame error when the channel is unknown at the receiver. The design criterion for the codes were developed by averaging over all the channel states. In practice, a feedback channel of low band-width is usually available where the transmitter can get some **channel** 

state information from the receiver. The transmitter can use this information to change it's power level or modulation or both. Since the channel state is a matrix instead of a scalar in the single antenna case, we first find out what is the sufficient statistic for space-time orthogonal block codes. It is shown that for a given channel state, the decoder essentially sees an AWGN channel with the signal to noise ratio scaled by the sufficient statistic. We discuss the optimal power control and adaptive modulation strategies. The effect of delay in passing the channel information from the receiver to the transmitter is examined. The results show a significant improvement (more than 10 dB in some cases) over the conventional system without feedback. 10 Refs.

28/7/31 (Item 2 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

(c) 2004 Elsevier Eng. Info. Inc. All rts. reserv.

05753732 E.I. No: EIP01015471709

Title: Performance of link adaptation in GPRS networks

Author: Gutierrez, Pablo Jose Ameigeiras; Wigard, Jeroen; Andersen, Peter Nodbak; Damqaard, Hans Christian; Mogensen, Preben

Corporate Source: Aalborg Univ, Aalborg, Den

Conference Title: 52nd Vehicular Technology Conference (IEEE VTS Fall VTC2000)

Conference Location: Boston, MA, USA Conference Date: 20000924-20000928 Sponsor: IEEE Boston Section; IEEE Vehicular Technology Society

E.I. Conference No.: 57806

Source: IEEE Vehicular Technology Conference v 2 n 52ND 2000. IEEE, Piscataway, NJ, USA,00CB37152. p 492-499

Publication Year: 2000

CODEN: IVTCDZ ISSN: 0740-0551

Language: English

Document Type: CA; (Conference Article) Treatment: T; (Theoretical)

Journal Announcement: 0102W3

Abstract: In GPRS four coding schemes have been defined with different degrees of data protection. The selection of fixed one for a certain packet transmission would lead to a throughput loss if the **channel quality** conditions vary during the connection, therefore, a link adaptation algorithm based on a BLER estimation is proposed and analyzed. The BLER is calculated from the acknowledgement messages reported by the receiver, so the acknowledgement frequency impacts the link adaptation, and therefore, is to be studied in the present article. The resulting link adaptation algorithm has been analyzed with a dynamic network simulator, under different frequency reuse patterns and frequency hopping strategies. Furthermore, the mean user throughput for the fixed coding schemes and for link adaptation has been estimated from GSM network reported measurements, and a network operator planning tool. (Author abstract) 7 Refs.

28/7/32 (Item 3 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

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05698425 E.I. No: EIP00115396287

Title: Data link control protocol for wireless ATM networks with adaptive coding rate

Author: Chan, K.S.; Chan, Sammy; Ko, K.T.

Corporate Source: City Univ of Hong Kong, Kowloon, Hong Kong

Conference Title: Proceedings of the IEEE Conference 2000 on High Perfomance Switching and Routing (ATM 2000)

Conference Date: 20000626-20000629 Conference Location: Heidelberg, Ger

E.I. Conference No.: 57526

Source: IEEE ATM Workshop, Proceedings 2000. p 483-489

Publication Year: 2000

ISSN: 1098-7789 Language: English

Document Type: JA; (Journal Article) Treatment: T; (Theoretical)

Journal Announcement: 0012W3

Abstract: In this paper, we propose a new data link control protocol for wireless ATM networks. This new protocol can support both real time and non-real-time services by adopting different error control mechanisms. For real time traffic, only forward error control (FEC) is used for error correction. For non-real-time traffic, a hybrid automatic repeat request (ARQ) scheme is adopted to reduce the cell loss ratio to a minimum level. In both the FEC and hybrid ARQ schemes, the coding rate is adapted to the conditions . When the signal-to-noise ratio (SNR) is high, the coding rate may be higher; while when the channel is bad, the coding rate is adjusted to be lower. The automatic coding rate adaptiveness guarantees the high utilization of the scarce wireless channel resources. (Author abstract) 13 Refs.

### (Item 4 from file: 8) 28/7/33

DIALOG(R) File 8:Ei Compendex(R)

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E.I. No: EIP99094799659

Title: Adaptive pulse sequence enhancer and correlator

Author: Liu, Hong; Cai, Ping; Hui, Junying

Corporate Source: Harbin Engineering Univ, Harbin, China

Source: Shengxue Xuebao/Acta Acustica v 23 n 5 1998. p 422-429

Publication Year: 1998

CODEN: SHGHAS ISSN: 0371-0025

Language: Chinese

Document Type: JA; (Journal Article) Treatment: A; (Applications); T;

(Theoretical); X; (Experimental) Journal Announcement: 9911W1

Abstract: Adaptive pulse sequence enhancer is the extension of adaptive line enhancer. Adaptive line enhancer can effectively detect CW signal only not so effective for any periodic signals . But adaptive pulse sequence enhancer can detect any periodic sequence effectively. Simulation test shows that the detective threshold of the new processor, CAAPSECO (coherent accumulator plus adaptive pulse sequence enhancer plus correlator), is lower than match filter. Its detective ability is better than match filter both in the ideal and multipath channel conditions . ( Edited author abstract) 5 Refs.

### (Item 5 from file: 8) 28/7/34

DIALOG(R) File 8:Ei Compendex(R)

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E.I. No: EIP99094779649

Title: Iterative decoding of multiple descriptions

Author: Srinivasan, Murari

Corporate Source: Univ of Maryland, College Park, MD, USA

Conference Title: Proceedings of the 1999 Data Compression Conference,

DCC-99

Conference Location: Snowbird, UT, USA Conference

19990329-19990331

Sponsor: IEEE

E.I. Conference No.: 55240

Source: Data Compression Conference Proceedings 1999. p 463-472

Publication Year: 1999

CODEN: DDCCF9 ISSN: 1068-0314

Language: English

Document Type: JA; (Journal Article) Treatment: G; (General Review)

Journal Announcement: 9910W3

Abstract: This paper considers the transmission of multiple descriptions over noisy channels rather than the on-off channels that are traditionally considered. We introduce the use of iterative decoding techniques similar to those used in 'turbo' decoding to decode multiple correlated descriptions transmitted over a noisy channel. For a given transmission rate per channel and a given **channel state**, the efficacy of iterative decoding **depends** on the correlatedness of the two descriptions produced by the multiple description encoder. We demonstrate that there is an optimal amount of redundancy or **correlation** for a given **channel state**. Hence, multiple description codes may also be viewed as joint source-channel codes. (Author abstract) 8 Refs.

### 28/7/35 (Item 6 from file: 8)

DIALOG(R) File 8:Ei Compendex(R)

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04938057 E.I. No: EIP98024050207

Title: Adaptive LMMSE receiver for wideband CDMA systems

Author: Oppermann, I.; Latva-aho, M.

Corporate Source: Univ of Oulu, Oulu, Finl

Conference Title: Proceedings of the 1997 IEEE Global Telecommunications Mini-Conference

Conference Location: Phoenix, AZ, USA Conference Date: 19971103-19971108

Sponsor: IEEE

E.I. Conference No.: 47733

Source: Conference Record / IEEE Global Telecommunications Conference v 4 1997. IEEE, Piscataway, NJ, USA, 97CB36125. p 133-138

Publication Year: 1997

CODEN: CRIEET Language: English

Document Type: CA; (Conference Article) Treatment: T; (Theoretical)

Journal Announcement: 9804W2

Abstract: Practical implementation of a linear minimum mean-squared error (LMMSE) receiver for wideband CDMA systems operating over fading channels is presented. The receiver uses improvements on the standard least mean squares (LMS) algorithm implementation of the adaptive LMMSE receiver to increase the speed of convergence during training and the rate at which the algorithm can track changes in the channel conditions. The approach taken is to break the received signal into quasi-stationary blocks and repeatedly apply the LMS algorithm for the blocks. The number of iterations as well as the block size is adapted according to the short time MSE value. Multiple step-sizes are used in parallel to speed up the convergence of the algorithm. The numerical results demonstrate that the modified adaptive algorithm improves the performance of the adaptive LMMSE receiver remarkably in fading channels. (Author abstract) 7 Refs. ? t28/7/39-48

### 28/7/39 (Item 10 from file: 8)

DIALOG(R) File 8:Ei Compendex(R)

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02251717 E.I. Monthly No: EIM8706-037206

Title: ADAPTIVE NONPARAMETRIC ACQUISITION OF FH-SS SIGNALS IN JAMMING.

Author: Pawlowski, Peter R.; Polydoros, Andreas Corporate Source: TRW, Redondo Beach, CA, USA

Conference Title: MILCOM 86: 1986 IEEE Military Communications Conference - Conference Record. Communications-Computers: Teamed for the '90's.

Conference Location: Monterey, CA, USA Conference Date: 19861005

Sponsor: IEEE Communications Soc, New York, NY, USA; US Air Force Communications & Electronics Assoc, USA; US Dep of Defense, Washington, DC, USA

E.I. Conference No.: 09528

Source: Proceedings - IEEE Military Communications Conference 1986. Publ by IEEE, New York, NY, USA. Available from IEEE Service Cent (Cat n 86CH2323-4), Piscataway, NJ, USA Pap 31. 6. 1, 8p

Publication Year: 1986

CODEN: PMICET Language: English

Document Type: PA; (Conference Paper)

Journal Announcement: 8706

Abstract: A matched-filter receiver for frequency-hopped spread-spectrum code acquisition in jamming is analyzed. The receiver uses an adaptive, nonparametric distribution-free median test detector requiring no knowledge of side information about the signal, jammer, and thermal noise parameters to implement an asymptotically constant false alarm rate test. The median of a reference sample set, empirically describing the code-absent probability distribution, determines the threshold used in the nonparametric detector. By updating the reference set every hop epoch, the threshold adapts to the channel condition. Adaptive threshold setting introduces memory so that tests are no longer independent, making exact closed-form analysis difficult. Performance approximations are developed and compared to simulation results illustrating acquisition performance. 9 refs.

### 28/7/40 (Item 1 from file: 34)

DIALOG(R) File 34: SciSearch(R) Cited Ref Sci (c) 2004 Inst for Sci Info. All rts. reserv.

05809843 Genuine Article#: WZ041 Number of References: 30

Title: A study on robust utterance verification for connected digits recognition

Author(s): Rahim MG (REPRINT); Lee CH; Juang BH

Corporate Source: AT&T BELL LABS, RES, 600 MT AVE/MURRAY HILL//NJ/07974 (REPRINT); AT&T BELL LABS, LUCENT TECHNOL/MURRAY HILL//NJ/07974

Journal: JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA, 1997, V101, N5,1 (MAY), P2892-2902

ISSN: 0001-4966 Publication date: 19970500

Publisher: AMER INST PHYSICS, CIRCULATION FULFILLMENT DIV, 500 SUNNYSIDE BLVD, WOODBURY, NY 11797-2999

Language: English Document Type: ARTICLE

Abstract: Utterance verification represents a key technology in the design of a user-friendly speech recognition system. One essential element when designing such a system is the ability to maintain a uniform performance over a wide range of acoustic conditions. An acoustic mismatch between training and testing conditions often results in an undesirable performance degradation This paper addresses the issue of robustness in utterance verification of a speech recognition system. Two techniques, namely signal bias removal (SBR) and on-line adaptation, are studied. The SBR algorithm is used to deal with global mismatch conditions caused by handset and channel differences. The on-line adaptation algorithm is used to adjust verification threshold at runtime for achieving a desirable trade-off between false rejection

and false alarm in new test **conditions**. Various on-line adaptation schemes are investigated. We show that both supervised or unsupervised adaptation can effectively **adjust** the verification **threshold** to achieve a desirable performance trade-off irrespective of the initial setting of the threshold. We report on connected digit recognition/verification results for matched and mismatched training and testing conditions. At a 5% digit string rejection rate, the proposed robust utterance verification system gives a reduction in string error rate between 32% and 35% over the conventional system, while still correctly rejects over 99.9% of nonvocabulary utterances. (C) 1997 American Institute of Physics.

28/7/41 (Item 1 from file: 35)

DIALOG(R) File 35: Dissertation Abs Online (c) 2004 ProQuest Info&Learning. All rts. reserv.

01534982 ORDER NO: AAD97-07804

# CARRIER RECOVERY FOR DIGITAL TRANSMISSION IN LAND MOBILE CELLULAR COMMUNICATION CHANNELS

Author: BARGER, HOWARD ALLEN

Degree: PH.D. Year: 1996

Corporate Source/Institution: THE UNIVERSITY OF TEXAS AT ARLINGTON (2502

Supervisor: VASANT K. PRABHU

Source: VOLUME 57/10-B OF DISSERTATION ABSTRACTS INTERNATIONAL.

PAGE 6434. 234 PAGES

In recent years, technologies such as cellular radio, integrated circuits, and microprocessors have made long range communications from mobile stations practical and affordable. The availability of technology has resulted in a demand for mobile radio communication services that exceeds the capacity of our present systems. To ease demand, the available system capacity must be increased. This may be provided by either allocating more frequency channels to the service or by making more efficient use of those currently allocated.

Spectrally efficient digital modulations, such as higher ordered quadrature amplitude modulation (M-ary QAM), are among the most promising techniques to improve system capacity. Whereas, these modulations are spectrally efficient, they require coherent demodulation which requires accurate representation of the signal carrier. Mobile signals, especially at UHF, are subject to multipath propagation that produces rapid variations in signal amplitude and phase. These variations prohibit the use of a stable carrier reference for demodulation; a reference that varies with channel conditions is required. This research is to investigate a method for recovering the dynamically changing carrier from modulated signals. The methods investigated are applicable to the narrowband land mobile channel over which the fading may be considered non-dispersive.

The background for this work is composed of research characterizing land mobile communication channels, and research in developing carrier recovery techniques. Previous work to characterize the channel has been concerned with **change** of the **signal** level over time, and the period of time the signal falls below an acceptable level. This work is now expanded to characterize the dynamic channel in terms of rates at which amplitude and phase may change, providing an understanding of channel effects at the demodulator. A carrier recovery technique is proposed to compensate for amplitude and phase distortion of the incoming signal resulting in correct recovery of data. Data is recovered using differential decision directed demodulation using a digital gain/phase-locked loop (D\$\sp\$\$SGPLL)

technique. A DSP demodulator is constructed and used to demonstrate the technique using recorded measurements of channel multipath to provide the channel environment.

28/7/42 (Item 1 from file: 94)

DIALOG(R) File 94: JICST-EPlus

(c) 2004 Japan Science and Tech Corp(JST). All rts. reserv.

02888470 JICST ACCESSION NUMBER: 97A0387021 FILE SEGMENT: PreJICST-E High-speed derivation method of signal change generation condition in combinational circuit.

NAKAHARA MICHIHIRO (1); ONISHI JUN (1); SUGIYAMA YUJI (1)

(1) Okayama Univ., Fac. of Eng.

Denki, Joho Kanren Gakkai Chugoku Shibu Rengo Taikai Koen Ronbunshu, 1996, VOL.47th, PAGE.330

JOURNAL NUMBER: L1892AAF

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Conference Proceeding

MEDIA TYPE: Printed Publication

### 28/7/43 (Item 1 from file: 144)

DIALOG(R) File 144: Pascal

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15490632 PASCAL No.: 02-0185822

Adaptive and integrated video communication for wireless ATM Signal processing X: theories and applications: Tampere, 4-8 September 2000

VASS Jozsef; XINHUA ZHUANG

GABBOUJ Moncef, ed; KUOSMANEN Paulti, ed

Eyeball.com Network Inc., West Vancouver, BC V7T 1A2, Canada; Multimedia Communications and Visualization Laboratory, Department of Computer Engineering & Computer Science, Columbia, MO 65211, United States

European Association for Signal Processing, Unknown; Tampere University of technology, Tampere, Finland

EUPSICO 2000 : European signal processing conference, 10 (Tampere FIN) 2000-09-04

2000 2305-2308

Publisher: TTKK-Paino, Tampere

ISBN: 952-15-0443-9 Availability: INIST-Y 33708; 354000097061035670

No. of Refs.: 14 ref.

Document Type: C (Conference Proceedings) ; A (Analytic)

Country of Publication: Finland

Language: English

and robust source coding, channel coding, and Highly efficient packetization techniques are proposed for video streaming over wireless ATM. At the base station, which is located at the boundary of the wireline wireless networks, video received from the wireline source is dynamically transformed to match both the hardware capabilities of mobile hosts and the time- varying wireless channel conditions . For wireless transmission, source coding, channel coding, and packetization are jointly implemented as part of the application. For source coding, we propose to use our three-dimensional significance-linked connected component analysis video codec. For channel coding and packetization, both intracell and interlaced (intercell) forward error correction are applied. Furthermore, time-varying channel characteristics is exploited by adaptively allocating the total bit budget between source coding and channel coding. Extensive performance evaluation demonstrates the effectiveness of the proposed wireless video streaming technique.

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28/7/44 (Item 2 from file: 144)

DIALOG(R) File 144: Pascal

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14601986 PASCAL No.: 00-0270424

A packet selection algorithm for adaptive transmission of smoothed video over a wireless channel

Special Issue on Wireless and Mobile Computing and Communications

ZHIMEI JIANG; KLEINROCK L

BOUKERCHE Azzedine, ed; DAS Sajal K, ed

AT & T Labs-Research, Unknown; Computer Science Department, University of California at Los Angeles, United States

Department of Computer Science, University of North Texas, Denton, Texas 76203-1366, United States; Center for Research in Wireless Mobility and Networking (CReWMaN), The University of Texas at Arlington, Arlington, Texas 76019-0015, United States

Journal: Journal of parallel and distributed computing, 2000, 60 (4) 494-509

ISSN: 0743-7315 Availability: INIST-20948; 354000082343960070

No. of Refs.: 22 ref.

Document Type: P (Serial) ; A (Analytic)

Country of Publication: United States

Language: English

This paper discusses techniques for transmitting smoothed video more efficiently over a wireless network. The fluctuation of wireless channel conditions can add a significant amount of delay to video packets and cause them to miss their play-out time. If a video is smoothed, it is possible to selectively deliver packets delayed at the base-station to reduce the impact of the missing packets on video quality. In this paper, we present a simple yet effective packet selection algorithm which accomplishes this goal. This algorithm determines whether to transmit a packet based on channel conditions as well as the likelihood that higher priority layers in the rest of the video will be delivered on time. We introduce the concept of quality index to measure the performance of the algorithm. Results from trace-driven simulations show that the performance of the algorithm is close to optimal under a wide variety of channel conditions when the threshold is set between 0.7 and 0.9.

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### 28/7/45 (Item 3 from file: 144)

DIALOG(R) File 144: Pascal

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14491379 PASCAL No.: 00-0153989

Rate-adaptive indoor infrared wireless communication systems using repeated and punctured convolutional codes

OHTSUKI I

Department of Electrical Engineering, Science University of Tokyo, Noda, Chiba 278-8510, Japan; Department of Electrical Engineering and Computer Sciences, University of California at Berkeley, Berkeley, CA 94720, United States

Journal: IEEE communications letters, 2000, 4 (2) 56-58 ISSN: 1089-7798 Availability: INIST-26496; 354000082059660070 No. of Refs.: 5 ref.

Document Type: P (Serial) ; A (Analytic) Country of Publication: United States

Language: English

We propose a rate-adaptive transmission scheme using repeated and punctured convolutional codes for indoor infrared wireless communications. The proposed system uses a coding scheme consisting of an outer punctured convolutional code and an inner repetition code, and varies code rate, i.e., bit rate adaptively depending on channel conditions. We show that the proposed system can realize communications in worse channel conditions at the expense of bit rate, while maximizing the throughput available to a user on his position.

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28/7/46 (Item 4 from file: 144)

DIALOG(R) File 144: Pascal

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13404182 PASCAL No.: 98-0096570

Variable rate adaptive channel coding for coherent and non-coherent Rayleigh fading channel

Cryptography and coding: Cirencester, December 17-19, 1997

LAU V K N; MARIC S V DARNELL Michael, ed

Signal Processing and Communication Group, Department of Engineering,

University of Cambridge, CB2 1PZ, United Kingdom

IMA international conference, 6 (Cirencester GBR) 1997-12-17 Journal: Lecture notes in computer science, 1997, 1355 180-191

ISBN: 3-540-63927-6 ISSN: 0302-9743 Availability: INIST-16343;

354000077520340190

No. of Refs.: 8 ref.

Document Type: P (Serial); C (Conference Proceedings); A (Analytic)

Country of Publication: Germany; United States

Language: English

We have evaluated the information theoretical performance of variable rate adaptive channel coding for the Rayleigh fading channel. The channel states are detected at the receiver and fed back to the transmitter by means of a noiseless feedback link. Based on the channel state informations, the transmitter can adjust the channel coding scheme accordingly. The channel capacity and the error exponent of are evaluated and the optimal control rules are found for coherent and non-coherent Rayleigh fading channel with feedback of channel states. It is shown that the variable rate scheme can only increase the channel error exponent. The effects of peak time constraint and the finite feedback delays are also considered. Finally, we compare the performance of the variable rate adaptive channel coding in high bandwidth-expansion systems (CDMA) and high bandwidth-efficiency systems (TDMA).

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28/7/47 (Item 5 from file: 144)

DIALOG(R) File 144: Pascal

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09956373 PASCAL No.: 92-0167855

Improving desig feedback equaliser performance using neural networks

RAIVIO K; SIMULA O; HENRIKSSON J

Helsinki univ. technology, lab. computer information sci., Espoo 02150, Finland

Journal: Electronics letters, 1991, 27 (23) 2151-2153 ISSN: 0013-5194 CODEN: ELLEAK Availability: INIST-12270;

354000011310370340

No. of Refs.: 7 ref.

Document Type: P (Serial) ; A (Analytic) Country of Publication: United Kingdom

Language: English Summary Language: English

Novel equaliser structures combining traditional transversal equalisers and neural computation have been introduced for adaptive discrete- signal detection. Extensive simulations using a two-path channel model and 16QAM modulation have been run to investigate the performance characteristics of these neural equalisers. The results have shown that they adapt very well to changing channel conditions, including both linear multipath and nonlinear distortions. The new structures are superior when compared to the traditional equalisers with equal computational complexity, especially in difficult channels

### 28/7/48 (Item 1 from file: 266)

DIALOG(R) File 266: FEDRIP

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### 00243434

IDENTIFYING NO.: 6212 AGENCY CODE: SBIR

COLOR VIDEO COMPRESSOR FOR TELEMETRY

PRINCIPAL INVESTIGATOR: Jain, A. K.

PERFORMING ORG.: Optivision Inc., 2655 Portage Bay Ave, Davis, CA 95616

SPONSORING ORG.: NAVY

DATES: 1987 FY: 1988 FUNDS: \$550,000 (0000000) TYPE OF AWARD:

Phase 1 and Phase 2

SUMMARY: THIS IS A PROPOSAL FOR THE DEVELOPMENT OF A COLOR VIDEO REAL-TIME DATA COMPRESSION SYSTEM. THE PROPOSED SYSTEM WILL CONTAIN A TRANSMITTER AND A RECEIVER. THE TRANSMITTER WILL ACCEPT AN NTSC STANDARD COLOR VIDEO SIGNAL, DIGITIZE IT, COMPRESS IT IN REAL-TIME, AND ENCODE IT FOR TRANSMISSION AT USER-SELECTABLE RATES RANGING FROM 10MB/S TO 50 MB/S. THE RECEIVER WILL DECODE AND DECOMPRESS THE DIGITAL BIT STREAM AND THE DIGITIZED VIDEO SIGNAL FOR DISPLAY. THE PROPOSED PHASE RECONSTRUCT I STUDY WILL RESULT IN A RECOMMENDED COMPRESSION ALGORITHM THAT HAS BEEN OPTIMIZED FOR I) RATE VERSUS SUBJECTIVE VISUAL QUALITY , II) TELEMETRY ERROR EFFECTS, AND III) OTHER CONSTRAINTS RELATED TO REAL TIME CHANNEL OPERATION, SIZE, POWER, MECHANICAL AND ELECTRICAL INTERFACE REQUIREMENTS. PHASE I RESULTS WILL BE ACCOMPANIED BY A SYSTEM-LEVEL HARDWARE ARCHITECTURE AND COMPUTER SIMULATION RESULTS. PHASE II WILL RESULT IN THE FABRICATION OF A PROTOTYPE SYSTEM FOR REAL-TIME DEMONSTRATION.

```
File 348: EUROPEAN PATENTS 1978-2004/Jul W03
         (c) 2004 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20040729,UT=20040722
         (c) 2004 WIPO/Univentio
Set
        Items
                Description
S1
       591351
                SIGNAL? ?
                S1(3N) (MODIFY? OR MODIFIE? ? OR MODIFICATION? OR CHANG??? ?
S2
        84812
              OR VARY??? ? OR VARIE? ? OR ADJUST?)
S3
                S1(3N) (READJUST? OR ADAPT??? ? OR ADAPTAB? OR ALTER OR ALT-
             ERS OR ALTERED OR ALTERING OR ALTERATION?)
S4
                S1(3N)(EDIT??? ? OR REVIS???? ? OR REDEFIN? OR REPROGRAM? -
             OR RECONFIGUR? OR ALTERR?)
S5
                S1(3N)RE()(CONFIGUR? OR PROGRAM???? ? OR PROGRAMM? OR DEFIN-
             E? ? OR DEFINI?)
S6
                S1(3N) (RESYNTHESI? OR REPRODUC? OR REGENERAT? OR RECREAT? -
             OR REFORM? OR RECONSTRUCT?)
S7
                S1(3N)RE()(SYNTHESIS? OR SYNTHESIZ? OR PRODUC???????? OR FO-
             RM????? ? OR FORMATION?)
S8
          244
                S1(3N)RE()(GENERAT????? ? OR CREAT????? ? OR CONSTRUCT?)
S9
      1125627
                CHANNEL? ? OR LINE OR LINES OR CIRCUIT??? ? OR PATH? ? OR -
             PATHWAY? ?
S10
        65192
                S9(2N) (QUALITY OR STATE OR STATES OR CONDITION? ? OR STATU-
             S? OR MODE OR MODES)
S11
      1299500
                STRINGEN? OR STANDARD? ? OR THRESHOLD? ? OR CONDITION? ? OR
              VALUE OR VALUES OR LEVEL? ? OR PROFILE? ? OR PATTERN? ?
                BOUND? ? OR RANGE OR RANGES OR CRITERIA? OR CRITERION? OR -
S12
      1056285
             NORM? ? OR MODEL? ? OR RULE OR RULES OR FORMULA?
                BASELINE? OR BASE()LINE? ? OR TEMPLATE? OR YARDSTICK? OR Y-
S13
       234506
             ARD()STICK? ? OR BENCHMARK? OR BENCH()MARK??? ? OR TARGET? ?
S14
                S11:S13(3N)(MODIFY? OR MODIFIE? ? OR MODIFICATION? OR CHAN-
       310582
             G??? ? OR VARY??? ? OR VARIE? ? OR ADJUST?)
S15
                S11:S13(3N)(READJUST? OR ADAPT???? ? OR ADAPTAB? OR ALTER OR
              ALTERS OR ALTERED OR ALTERING OR ALTERATION?)
S16
        10056
                S11:S13(3N)(EDIT??? ? OR REVIS???? ? OR REDEFIN? OR REPROG-
             RAM? OR RECONFIGUR? OR ALTERR?)
S17
          252
                S11:S13(3N)RE()(CONFIGUR? OR PROGRAM???? ? OR PROGRAMM? OR -
             DEFINE? ? OR DEFINI?)
S18
         2415
                S10(5N)(DEPEND? OR CORRELAT? OR LINK? OR INTERLINK? OR INT-
             ERELAT? OR INTERRELAT?)
S19
         1109
                S10(5N)(RELAT?? ? OR RELATING OR RELATION? OR CORELAT? OR -
             CONTINGEN? OR PREDICAT? OR CIRCUMSCRIB?)
S20
         2659
                S10(5N)(BASE OR BASED OR BASING OR SUBJECT?)
S21
                S1(3N)RE()(PROGRAMME? ? OR PROGRAMMING OR RE()(FORM? ? OR -
             FORMED OR FORMING OR FORMATION? ))
S22
           53
                S11:S13(3N)RE()(PROGRAMME? ? OR PROGRAMMING)
S23
          859
                S10(5N)LINK??????
S24
        18580
                (S2:S8 OR S21) (25N) (S14:S17 OR S22)
S25
          364
                S24 (25N) S10
S26
            7
                S25/TI, AB
S27
         1480
                IC='G10L-019'
S28
          474
                IC='G10L-013'
S29
         2729
                IC='H03M-013'
S30
         5977
                IC='H04L-001'
S31
           17
                S25 AND S27:S30
S32
         7670
                (S2:S8 OR S21)(5N)(SPEECH? OR SPOK? OR SPEAK? OR SOUND OR -
             AUDIO OR ACOUSTIC?? ? OR PHONIC? ? OR AURAL OR SONIC? ?)
S33
           10
                S32 (25N) S25
S34
           30
                S26 OR S31 OR S33
S35
          106
                (S2:S8 OR S21) (5N) ITERATIV?
```

(S2:S8 OR S21)(5N)(PERIODIC? OR RECURR? OR FREQUENT? OR OC-

S36

2505

# CASIONAL? OR CONTINUAL? OR REPEAT? OR REPITITIOUS? OR SYSTEMATIC?)

s37	1601	(S2:S8 OR S21) (5N) CONTINUOUS?
S38	5	S35:S37(25N)S25
S39	99	S2:S8(25N)(S18:S20 OR S23)
S40	11	S39 AND S27:S30
S41	24	S39/TI, AB, CM
S42	6	S39(25N)(S32 OR S35:S37)
S43	39	S38 OR S40:S42
S44	36	S43 NOT S34
S45	36	IDPAT (sorted in duplicate/non-duplicate order)
S46	36	IDPAT (primary/non-duplicate records only)

## (Item 1 from file: 348) DIALOG(R) File 348: EUROPEAN PATENTS (c) 2004 European Patent Office. All rts. reserv. 01667476 Memory-efficient ADSL transmission in the presence of TCM-ISDN interferers Speicher-effiziente ADSL-Ubertragung bei TCM-ISDN-Storungen Transmission ADSL econome en memoire en presence d'interferences TCM-ISDN PATENT ASSIGNEE: Texas Instruments Incorporated, (279078), 7839 Churchill Way, Mail Station 3999, Dallas, Texas 75251, (US), (Applicant designated States: all) INVENTOR: Kratochwil, Konrad W., P.O. Box 231, 94026, Menlo Park, (US) Zogakis, Thomas N., 1903 Montecito Ave, 94043, Mountain View, (US) Melsa, Peter J., 950 S. Third Street, 49120, Niles, (US) LEGAL REPRESENTATIVE: Holt, Michael et al (50423), Texas Instruments Limited, European Patents Department (MS 13), PO Box 5069, Northampton NN4 7ZE, (GB) PATENT (CC, No, Kind, Date): EP 1370039 A1 031210 (Basic) APPLICATION (CC, No, Date): EP 2003101647 030605; PRIORITY (CC, No, Date): US 386524 P 020605; US 342059 030114 DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LI; LU; MC; NL; PT; RO; SE; SI; SK; TR

INTERNATIONAL PATENT CLASS: H04L-027/26; H04L-005/02; H04L-005/14;

### ABSTRACT EP 1370039 A1

H04L-001/00

A method of communicating data across a channel that experiences near-end cross talk (NEXT) interference and far-end cross talk (FEXT) interference in alternate intervals. In one embodiment, the method comprises: a) determining NF)), the number of bits per symbol usable in a FEXT-only mode of operation (306); b) determining NS)), a number of bits per symbol usable in a single mode of operation (310); c) determining whether the FEXT-only mode or the single mode provides a higher data rate (312); and d) configuring a modem to transmit using the mode having a higher data rate (316). The FEXT-only mode may be determined to have a higher data rate when 126NF)) >340NS)).

ABSTRACT WORD COUNT: 112

ABSTRACT WORD COUNT: 112

NOTE:

Figure number on first page: //

LEGAL STATUS (Type, Pub Date, Kind, Text):

EXTENDED DESIGNATED STATES: AL; LT; LV; MK

Application: 031210 Al Published application with search report LANGUAGE (Publication, Procedural, Application): English; English; English; FULLTEXT AVAILABILITY:

Available Text Language Update Word Count
CLAIMS A (English) 200350 535
SPEC A (English) 200350 5336
Total word count - document A 5871
Total word count - document B 0
Total word count - documents A + B 5871

...INTERNATIONAL PATENT CLASS: H04L-001/00

...SPECIFICATION is allocated a number of data bits, and the allocation of bits may be dynamically adjusted as channel conditions change.

Each carrier signal may also be allocated a small individual gain factor to further improve communications performance.

Total word count - document B

```
34/5, K/3
              (Item 3 from file: 348)
DIALOG(R) File 348: EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.
01437825
Channel estimation and data decisions for multicarrier reception
Kanalschatzung und Datenentscheidung fur Mehrtragerempfang
Estimation de canal et decisions de donnees pour la reception multiporteuse
PATENT ASSIGNEE:
  BRITISH BROADCASTING CORPORATION, (215360), Broadcasting House, London
    W1A 1AA, (GB), (Applicant designated States: all)
INVENTOR:
  Robinson, Adrian Paul, c/o British Broadcast Corp, Res. & Dev Dpt,
    Kingswood Warren, Tadworth, Surrey KT20 6NP, (GB)
LEGAL REPRESENTATIVE:
  Abnett, Richard Charles (27531), REDDIE & GROSE 16 Theobalds Road, London
    WC1X 8PL, (GB)
PATENT (CC, No, Kind, Date): EP 1221793 A2 020710 (Basic)
                               EP 1221793 A3 030910
APPLICATION (CC, No, Date):
                               EP 2002250062 020107;
PRIORITY (CC, No, Date): GB 100275 010105
DESIGNATED STATES: BE; DE; FI; FR; IT
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H04L-025/02; H04L-025/06; H04L-027/26;
  H04L-001/00
ABSTRACT EP 1221793 A2
    In a DVB-T receiver, a channel equaliser (110) generates an indirect
  measure of transmission channel state from scattered pilots transmitted
  in the signal, and interpolates (312,316) from these to give channel
  state measurement values for all the carriers. A direct measure of
  transmission channel state is separately obtained from the differences
  (246) between the input values and hard quantised (244) values obtained
  from them, filtered in a symbol recursive filter (260). Each channel state measure is applied to a control law circuit (320,280) to provide a
  control signal (348,346). The control signal indicating the poorer
  quality is selected (350) to provide channel state measurement used for
  control. This control signal (354) controls the confidence-level
  discrimination levels of soft-decision quantisers (226) in the main
  signal path.
ABSTRACT WORD COUNT: 126
NOTE:
  Figure number on first page: 6
LEGAL STATUS (Type, Pub Date, Kind, Text):
 Application:
                  020710 A2 Published application without search report
 Change:
                   030827 A2 International Patent Classification changed:
                             20030709
                  030910 A3 Separate publication of the search report
 Search Report:
                  040506 A2 Date of request for examination: 20040309
 Examination:
LANGUAGE (Publication, Procedural, Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language
                            Update
                                      Word Count
      CLAIMS A
                (English)
                                       1158
                            200228
      SPEC A
                 (English)
                                       8163
                            200228
Total word count - document A
                                       9321
```

Total word count - documents A + B

...INTERNATIONAL PATENT CLASS: H04L-001/00

... SPECIFICATION not further described in detail.

The quantisers 226a, 226b and 226c all receive a control signal which adjusts the amplitudes of the discrimination levels in the quantisers relative to the received values , and thus changes the confidence level discrimination levels in dependence upon channel The metric assignment and demapping circuit 112 generates the control signal for the quantisers 226...

34/5,K/5 (Item 5 from file: 348)

DIALOG(R) File 348: EUROPEAN PATENTS

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01316637

Link adaptation for RT-EGPRS

Verbindungsanpassung fur RT-EGPRS

Adaptation de liaison pour RT-EGPRS

PATENT ASSIGNEE:

LUCENT TECHNOLOGIES INC., (2143720), 600 Mountain Avenue, Murray Hill, New Jersey 07974-0636, (US), (Applicant designated States: all) INVENTOR:

Demetrescu, Christian, 50 Fielding Avenue, Twickenham, Middlesex TW2 5LY,

Samaras, Konstantinos, 53 Montagu Street, Swindon, Wiltshire SN2 2HL,

Samuel, Louis Gwyn, 82 Standen Way, Abbey Mead, Swindon, Wiltshire SN2 3YG, (GB)

Tatesh, Said, 44 Beatrice Street, Swindon, Wiltshire SN2 1BB, (GB) Wu, Jian Ju, 32 Huntington Close, Reading, Berkshire, (GB) LEGAL REPRESENTATIVE:

Williams, David John (86431), Lucent Technologies UK Limited, 5 Mornington Road, Woodford Green, Essex IG8 OTU, (GB) PATENT (CC, No, Kind, Date): EP 1126651 A1 010822 (Basic)

APPLICATION (CC, No, Date): EP 2000301205 000216;

DESIGNATED STATES: DE; FI; FR; GB; SE

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: H04L-001/00

### ABSTRACT EP 1126651 A1

NOTE:

There is disclosed a technique for link adaptation, suitable for a packet switched mobile communication system, in which a command or request to change the mode of a codec in a transmitter is sent only responsive to a change in the condition of a received signal. ABSTRACT WORD COUNT: 47

Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 010822 Al Published application with search report 020417 Al Date of request for examination: 20020209 Examination: LANGUAGE (Publication, Procedural, Application): English; English; English FULLTEXT AVAILABILITY:

Available Text Language Update Word Count 200134 CLAIMS A (English) 305

SPEC A (English) 200134 4300

Total word count - document A 4605 Total word count - document B 0
Total word count - documents A + B 4605

INTERNATIONAL PATENT CLASS: H04L-001/00

...SPECIFICATION the current signal level is different from the previous signal level, and thus detects a **change** in **channel conditions**. This may manifest, for example, in a variation, such as a deterioration, in the received signal strength.

The detection block determines whether the **change** in the **signal** strength is sufficient to justify a change in the codec mode of the transmitter at...

### 34/5,K/6 (Item 6 from file: 348)

DIALOG(R) File 348: EUROPEAN PATENTS

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01256430

Method of generating space-time codes for generalized layered space-time architectures

Verfahren zur Erzeugung von raum-zeitlichen Koden fur generalisierte Zeit und Raum Schichtarchitektur

Procede de generation de codes spatio-temporels pour architecture par couches temporelle et spatiale generalisee

PATENT ASSIGNEE:

Hughes Electronics Corporation, (2464050), 200 N. Sepulveda Boulevard, El Segundo, California 90245-0956, (US), (Applicant designated States: all)

INVENTOR:

Hammons, Roger A., Jr., 14074 Saddle River Road, North Potomac, Maryland 20878, (US)

El Gamal, Hesham, 898 Deacon Circle, Columbus, Ohio 43214, (US) LEGAL REPRESENTATIVE:

Lindner, Michael, Dipl.-Ing. et al (80041), Witte, Weller & Partner, Patentanwalte, Postfach 105462, 70047 Stuttgart, (DE)

PATENT (CC, No, Kind, Date): EP 1085688 A2 010321 (Basic)

APPLICATION (CC, No, Date): EP 115149 000712;

PRIORITY (CC, No, Date): US 153936 990915

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: H04L-001/06

### ABSTRACT EP 1085688 A2

Space-time codes for use with layered architectures with arbitrary numbers of antennas are provided such as rate k/n convolutional codes (e.g., rates higher than or equal to l/n where n is the number of transmit antennas). Convolutional codes for layered space-time architectures are generated using matrices over the ring F((D)) of formal power series in variable D.

ABSTRACT WORD COUNT: 58

NOTE.

Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 010321 A2 Published application without search report Change: 010530 A2 Inventor information changed: 20010412 LANGUAGE (Publication, Procedural, Application): English; English

FULLTEXT AVAILABILITY:

```
Available Text Language
                           Update
                                     Word Count
                           200112
      CLAIMS A (English)
                                      1214
                (English)
      SPEC A
                           200112
                                      2872
Total word count - document A
                                      4086
Total word count - document B
                                         0
Total word count - documents A + B
                                      4086
```

INTERNATIONAL PATENT CLASS: H04L-001/06

... SPECIFICATION use of diversity techniques in which the receiver is afforded multiple replicas of the transmitted **signal** under **varying channel conditions**.

Recently, information theoretic studies have shown that spatial diversity provided by multiple transmit and/or...

### 34/5,K/7 (Item 7 from file: 348)

DIALOG(R) File 348: EUROPEAN PATENTS

(c) 2004 European Patent Office. All rts. reserv.

### 01233305

Wireless communication system and method having a space-time architecture, and receiver for multi-user detection

Funkkommunikationssystem und -Verfahren mit einer Raum-Zeit-Architektur und Empfanger fur Mehrbenutzerdetektion

Systeme et methode de communication sans fil avec une architecture par couches temporelle et spatiale, et recepteur pour la detection d'utilisateurs multiples

### PATENT ASSIGNEE:

Hughes Electronics Corporation, (2464050), 200 N. Sepulveda Boulevard, El Segundo, California 90245-0956, (US), (Applicant designated States: all)

### INVENTOR:

El Gamal, Hesham, 14220 Oakpointe Drive, Laurel, Maryland 20707, (US) Hammons, Roger A.jr., 14074 Saddle River Road, North Potomac, Maryland 20878, (US)

### LEGAL REPRESENTATIVE:

Lindner, Michael, Dipl.-Ing. et al (80041), Witte, Weller & Partner, Patentanwalte, Postfach 105462, 70047 Stuttgart, (DE)

PATENT (CC, No, Kind, Date): EP 1069722 A2 010117 (Basic)

APPLICATION (CC, No, Date): EP 115142 000712;

PRIORITY (CC, No, Date): US 143293 990712

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: H04L-001/06

### ABSTRACT EP 1069722 A2

A threaded space-time (TST) architecture in a multiple antenna wireless communication system uses the coded transmission in each layer of a transmission resource array as a space-time code. Each layer of a layer set is active during all available symbol transmission intervals, and each of the transmit antennas are used equally often, such that layers each transmit a symbol using a different antenna during each symbol transmission interval. A receiver is provided for multi-user reception using an iterative, soft-input/soft-output (SISO) multi-user detection algorithm based on minimum mean square error (MMSE) criterion, among other methods.

ABSTRACT WORD COUNT: 95 NOTE:

Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 010117 A2 Published application without search report LANGUAGE (Publication, Procedural, Application): English; English; English; FULLTEXT AVAILABILITY:

Available Text Language Update Word Count
CLAIMS A (English) 200103 1066
SPEC A (English) 200103 11142
Total word count - document A 12208
Total word count - document B 0
Total word count - documents A + B 12208

INTERNATIONAL PATENT CLASS: H04L-001/06

...SPECIFICATION use of diversity techniques in which the receiver is afforded multiple replicas of the transmitted **signal** under **varying channel conditions**. Recently, information theoretic studies have shown that spatial diversity provided by multiple transmit and/or...

### 34/5,K/12 (Item 12 from file: 348)

DIALOG(R) File 348: EUROPEAN PATENTS

(c) 2004 European Patent Office. All rts. reserv.

00362852

Active acoustic attenuation system for higher order mode non-uniform sound field in a duct.

Aktive Schalldampfungsanordnung fur ein nichtuniformes Schallfeld hoherer Ordnung in einem Rohr.

Dispositif d'attenuation acoustique pour un champ acoustique a mode non uniforme de plus haut ordre dans un tube.

PATENT ASSIGNEE:

NELSON INDUSTRIES, INC., (816150), Highway 51 West, Stoughton Wisconsin 53589, (US), (applicant designated states: AT;BE;CH;DE;ES;FR;GB;GR;IT;LI;LU;NL;SE)

INVENTOR:

Eriksson, Larry J., 5301 Greenbriar Lane, Madison Wisconsin 53714, (US) Allie, Mark C., 1702 Bonner Trail, Oregon Wisconsin 53575, (US) Hoops, Richard H., 617 Mellum Drive, Stoughton Wisconsin 53589, (US) LEGAL REPRESENTATIVE:

Burke, Steven David et al (47741), R.G.C. Jenkins & Co. 26 Caxton Street, London SW1H ORJ, (GB)

PATENT (CC, No, Kind, Date): EP 333461 A2 890920 (Basic)

EP 333461 A3 900314 EP 333461 B1 930623

APPLICATION (CC, No, Date): EP 89302561 890315;

PRIORITY (CC, No, Date): US 168932 880316

DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; LU; NL; SE INTERNATIONAL PATENT CLASS: G10K-011/16;

CITED PATENTS (EP A): GB 2088951 A; US 4665549 A; US 4677677 A CITED REFERENCES (EP A):

JOURNAL OF VIBRATION, ACOUSTICS, STRESS, AND RELIABILITY IN DESIGN, vol. 106, July 1984, pages 399-404, The American Society of Mechanical Engineers; J. TICHY et al.: "A study of active control of noise in ducts";

### ABSTRACT EP 333461 A2

A system is provided for increasing the frequency range of an active acoustic attenuation system in a duct without increasing cut-off

frequency f(sub(c)) of the duct or otherwise splitting or partitioning the duct into separate ducts or chambers. The frequency range is increased above f(sub(c)) to include higher order modes. A plurality of cancelling model sets are provided. Each transverse portion of the acoustic pressure wave has its own set of an adaptive filter model, cancelling speaker, and error microphone. A single input microphone may service all sets.

ABSTRACT WORD COUNT: 94

```
LEGAL STATUS (Type, Pub Date, Kind, Text):
                  020612 B1 Date of lapse of European Patent in a
                            contracting state (Country, date): AT
                            19930623, BE 19930623, CH 19930623, LI
                            19930623, ES 19930623, GR 19930623, NL
                            19930623, SE 19930623,
                  20000126 B1 Date of lapse of European Patent in a
 Lapse:
                            contracting state (Country, date): AT
                            19930623, BE 19930623, CH 19930623, LI
                            19930623, GR 19930623, NL 19930623, SE
                            19930623,
 Application:
                  890920 A2 Published application (Alwith Search Report
                             ;A2without Search Report)
 Search Report:
                  900314 A3 Separate publication of the European or
                            International search report
 Examination:
                  900627 A2 Date of filing of request for examination:
                            900426
 Examination:
                  911211 A2 Date of despatch of first examination report:
                            911028
                  920805 A2 Representative (change)
 Change:
 Grant:
                  930623 B1 Granted patent
 Lapse:
                  940126 B1 Date of lapse of the European patent in a
                            Contracting State: CH 930623, LI 930623
                  940126 B1 Date of lapse of the European patent in a
 Lapse:
                            Contracting State: CH 930623, LI 930623
                  940302 B1 Date of lapse of the European patent in a
 Lapse:
                            Contracting State: CH 930623, LI 930623, SE
                            930623
                  940511 B1 Date of lapse of the European patent in a
 Lapse:
                            Contracting State: AT 930623, CH 930623, LI
                            930623, SE 930623
                  940615 B1 Date of lapse of the European patent in a
 Lapse:
                            Contracting State: AT 930623, CH 930623, LI
                            930623, NL 930623, SE 930623
 Oppn None:
                  940615 B1 No opposition filed
 Lapse:
                  940622 B1 Date of lapse of the European patent in a
                            Contracting State: AT 930623, BE 930623, CH
                            930623, LI 930623, NL 930623, SE 930623
LANGUAGE (Publication, Procedural, Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language
                           Update
                                     Word Count
      CLAIMS B
               (English)
                          EPBBF1
                                      3363
      CLAIMS B
                 (German)
                          EPBBF1
                                      2075
      CLAIMS B
                 (French)
                           EPBBF1
                                      2690
      SPEC B
                                      4278
                (English)
                           EPBBF1
Total word count - document A
Total word count - document B
                                     12406
Total word count - documents A + B
                                     12406
```

<sup>...</sup>SPECIFICATION poles and zeros, as in the noted incorporated patents. The use of poles to model **the** feedback **path** is significant. Individual finite impulse response (FIR) filters are not adequate to truly

adaptively cancel direct and feedback noise. Instead, a single infinite impulse response ( IIR ) filter is needed to provide truly adaptive cancellation of the direct noise and acoustic feedback. Thus, each of models 40, 240 and 340 adaptively recursively models the acoustic system and the feedback path on-line. Since each model is recursive, it provides the IIR...

? t34/5, k/17, 20-22; t34/5/23

### 34/5,K/17 (Item 17 from file: 348) DIALOG(R) File 348: EUROPEAN PATENTS (c) 2004 European Patent Office. All rts. reserv. 00177007 Modem. Modulator-Demodulator. Modulateur-demodulateur. PATENT ASSIGNEE: CODEX CORPORATION, (604590), 20 Cabot Boulevard, Mansfield Massachusetts 02048, (US), (applicant designated states: AT; BE; CH; DE; FR; GB; IT; LI; NL; SE) INVENTOR: Qureshi, Shahid U.H., 24 Indian Ridge Road, Natick Massachusetts, (US) Seitz, Karl W., Six Quail Run Road, Norfolk Massachusetts, (US) Wilson, Robert M., 33 Carl Road, Walpole Massachusetts, (US)

Deans, Michael John Percy et al (30021), Lloyd Wise, Tregear & CO. Norman House 105-109 Strand, London WC2R OAE, (GB)

PATENT (CC, No, Kind, Date): EP 154565 A2 850911 (Basic)

EP 154565 A3 870715 EP 154565 B1 910925

APPLICATION (CC, No, Date): EP 85301614 850308;

PRIORITY (CC, No, Date): US 587386 840308

DESIGNATED STATES: AT; BE; CH; DE; FR; GB; IT; LI; NL; SE INTERNATIONAL PATENT CLASS: H04L-001/12; H04L-001/20

CITED PATENTS (EP A): US 3536840 A; US 3536840 A; EP 39191 A; EP 39191 A; US 3665394 A

CITED REFERENCES (EP A):

LEGAL REPRESENTATIVE:

PATENT ABSTRACTS OF JAPAN, vol. 8, no. 107 (E-245) 1544 , 19th May 1984; & JP-A-59 23 639 (MATSUSHITA DENKI SANGYO K.K.) 07-02-1984
IBM TECHNICAL DISCLOSURE BULLETIN, vol. 18, no. 8, January 1976, pages 2726,2727, New York, US; P.G. BRYANT et al.: "Line quality monitoring method";

### ABSTRACT EP 154565 A2

Modem.

A modem which includes transmission means for transmitting information signals to a remote device over a channel at any one of a multiplicity of communication rates, reception means for receiving information signals from the remote device over the channel at any one of the communication rates, quality-monitoring means for monitoring the quality of the channel on the basis of the received information signals, and rate control means responsive to the quality-monitoring means for selecting a current communication rate based on the channel quality, the rate control means including fall forward means for indicating that an increase in the current communication rate to a higher communication rate is desired and for implementing the increase when the remote device concurs.

ABSTRACT WORD COUNT: 121

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 850911 A2 Published application (Alwith Search Report

; A2without Search Report)

Search Report: 870715 A3 Separate publication of the European or

International search report

Examination: 880316 A2 Date of filing of request for examination:

880114

Examination: 900110 A2 Date of despatch of first examination report:

891129

Grant: 910925 B1 Granted patent

Lapse: 920318 B1 Date of lapse of the European patent in a

Contracting State: CH 910925, LI 910925

Lapse: 920513 B1 Date of lapse of the European patent in a

Contracting State: CH 910925, LI 910925, SE

910925

Lapse: 920715 B1 Date of lapse of the European patent in a

Contracting State: AT 910925, CH 910925, LI

910925, SE 910925

Oppn None: 920916 Bl No opposition filed

Lapse: 991020 B1 Date of lapse of European Patent in a

contracting state (Country, date): AT 19910925, CH 19910925, LI 19910925, IT

19910925, SE 19910925,

LANGUAGE (Publication, Procedural, Application): English; English; FULLTEXT AVAILABILITY:

Available Text Language Update Word Count CLAIMS B (English) EPBBF1 1128 CLAIMS B (German) EPBBF1 994 CLAIMS B (French) EPBBF1 1330 SPEC B (English) EPBBF1 5468 Total word count - document A Total word count - document B 8920

Total word count - document B 8920
Total word count - documents A + B 8920

INTERNATIONAL PATENT CLASS: H04L-001/12 ...

### ... H04L-001/20

...CLAIMS means further comprises adaptive equalization and demodulation circuitry for equalizing and demodulating said received information signals using adaptive equalization and demodulation parameters which have initial values, and said rate control means further comprises save equalizer means responsive to said quality-monitoring means and adapted to update said values when said channel quality is good and to reinitialize said values when said channel quality is poor.

7. A modem according to any preceding claim, wherein said information signals comprise...

34/5,K/20 (Item 1 from file: 349)

DIALOG(R) File 349: PCT FULLTEXT

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00989785 \*\*Image available\*\*

METHODS AND ARRANGEMENTS IN A TELECOMMUNICATION SYSTEM RELATED APPLICATIONS PROCEDES ET AGENCEMENTS RELATIFS A UN SYSTEME DE TELECOMMUNICATION Patent Applicant/Assignee:

TELEFONAKTIEBOLAGET LM ERICSSON (PUBL), S-126 25 Stockholm, SE, SE (Residence), SE (Nationality), (For all designated states except: US) Patent Applicant/Inventor:

SJOBERG Johan, Karlbergsvagen 62, 1 tr, S-113 35 Stockholm, SE, SE

delicate

(Residence), SE (Nationality), (Designated only for: US) BRUHN Stefan, Fridshyddevagen 3, S-191 36 Sollentuna, SE, SE (Residence), SE (Nationality), (Designated only for: US) Legal Representative: BERGENSTRAHLE & LINDVALL AB (agent), P.O.Box 17704, S-118 93 Stockholm, Patent and Priority Information (Country, Number, Date): Patent: WO 200319850 A1 20030306 (WO 0319850) Application: WO 2002SE1510 20020822 (PCT/WO SE0201510) Priority Application: SE 20012849 20010822 Designated States: (Protection type is "patent" unless otherwise stated - for applications prior to 2004) AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR (OA) BF BJ CF CG CI CM GA GN GO GW ML MR NE SN TD TG (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW (EA) AM AZ BY KG KZ MD RU TJ TM Main International Patent Class: H04L-001/12 Publication Language: English Filing Language: English Fulltext Availability:

### English Abstract

Detailed Description

Fulltext Word Count: 12012

In adapting the modes of a codec for a communication channel in a mobile telecommunication system, a delay unit is provided to delay the adaptation if communication conditions of the channel are improving, so that a less robust mode having a higher intrinsic quality is selected only after some delay. Otherwise the adapting is not delayed. This may to some extent reduce the quality of the received speech signal, abut the out-of-phase problems due to AMR loop delay in speech codecs are minimized. In particular in speech codecs built according to the AMR standard. The quality of the communication is measured to give quality values for successive measurement occasions. The quality of the communication is measured to give quality values for successive measurement occasions. The quality values are first linearly filtered. The delay unit comprises a plurality of memory cells (X"sub"1, X"sub"2, , X"sub"M) in a memory (810) for storing the quality values of the communication conditions of the channel for the most recent measurement occasions. A selector (820) operates according to an algorithm (825) for selecting one of the memory cells. The content of the selected cell is used to set the mode of the codec.

### French Abstract

Lors de l'adaptation des modes d'un codeur-decodeur pour une voie de communication dans un systeme de telecommunication mobile, une unite de retard est destinee a retarder l'adaptation si les conditions de communication de la voie s'ameliorent, si bien qu'un mode moins robuste a qualite intrinseque plus elevee n'est selectionne qu'apres un certain retard. Autrement, l'adaptation n'est pas retardee. Cela peut dans une certaine mesure reduire la qualite du signal vocal recu, mais les problemes de dephasage dus au retard de boucle de multidebit adaptatif (AMR) dans des codeurs-decodeurs de voix sont reduits a un minimum, en particulier dans les codeurs-decodeurs de voix construits selon la norme AMR. La qualite de la communication est mesuree afin de donner des

valeurs de qualite aux occasions de mesure successives. Les valeurs de qualite sont d'abord filtrees de maniere lineaire. L'unite de retard comporte une pluralite de cellules de memoire (X"sub"1, X"sub"2, , X"sub"M) dans une memoire (810) destinee au stockage des valeurs de qualite des conditions de communication de la voie pour les occasions de mesure les plus recentes. Un selectionneur (820) fonctionnant selon un algorithme (825) sert a selectionner l'une des cellules de memoire. Le contenu de la cellule selectionnee est utilise pour fixer le mode du codeur-decodeur.

Legal Status (Type, Date, Text)

Publication 20030306 Al With international search report.

Examination 20030515 Request for preliminary examination prior to end of 19th month from priority date

Main International Patent Class: H04L-001/12

Fulltext Availability:

Detailed Description

Detailed Description

... and an increased bit error rate and ultimately results in a bad quality of the reconstructed speech signal.

The problem is exemplified by the case where the **channel conditions** vary periodically with a period of about twice the AMR loop delay. At this critical fluctuation rate of the **channel condition**, the adaptation will be maximally

34/5,K/21 (Item 2 from file: 349)

DIALOG(R) File 349: PCT FULLTEXT

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00948510 \*\*Image available\*\*

RADIOCOMMUNICATION EMPLOYING SELECTED SYNCHRONIZATION TECHNIQUE
RADIOCOMMUNICATION FAISANT INTERVENIR LA TECHNIQUE DE SYNCHRONISATION
SELECTIVE

Patent Applicant/Assignee:

TELEFONAKTIEBOLAGET LM ERICSSON (publ), SE-126 25 Stockholm, SE, SE (Residence), SE (Nationality), (For all designated states except: US) Patent Applicant/Inventor:

LINDOFF Bengt, Morkullevagen 45, S-237 36 Bjarred, SE, SE (Residence), SE (Nationality), (Designated only for: US)

SINGVALL Jakob, Sodra Esplanaden 18 C, S-223 52 Lund, SE, SE (Residence), SE (Nationality), (Designated only for: US)

Legal Representative:

O'CONNELL David Chistopher (et al) (agent), Haseltine Lake & Co, Imperial House, 15-19 Kingsway, London WC2B 6UD, GB,

Patent and Priority Information (Country, Number, Date):

Patent:

WO 200282711 A1 20021017 (WO 0282711)

Application:

WO 2002EP3760 20020404 (PCT/WO EP0203760)

Priority Application: US 2001826967 20010406

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: H04L-001/00

International Patent Class: H04L-007/04; H04L-025/06; H04L-025/02

Publication Language: English

Filing Language: English Fulltext Availability:
Detailed Description

Claims

Fulltext Word Count: 4334

### English Abstract

A method and apparatus for acquiring time synchronization to a received signal are described. First, a burst of data which includes a known sequence is received. This received signal is processed using a plurality of different synchronization techniques. Each synchronization technique can be paired with a corresponding channel estimation technique, which pairing is predetermined to be optimized for particular channel conditions. A processor or model validation unit selects the channel estimate associated with the channel conditions currently being experienced by the radio signal.

### French Abstract

La presente invention concerne un procede et un dispositif permettant la synchronisation de temps d'acquisition d'un signal recu. Tout d'abord, un paquet de donnees qui comprend une sequence connue est recu. Ce signal recu est traite grace a une pluralite de techniques de synchronisation differentes. Chaque technique de synchronisation peut etre appariee a une technique d'estimation de canal correspondante, ledit appariement etant predetermine pour etre optimal pour des conditions de canal particulieres. Un processeur ou une unite de validation de modele selectionne le canal issu de l'estimation, associe aux conditions de canal auxquelles le signal radio est couramment expose.

Legal Status (Type, Date, Text)
Publication 20021017 A1 With international search report.
Examination 20021114 Request for preliminary examination prior to end of 19th month from priority date

Main International Patent Class: H04L-001/00 Fulltext Availability:
Detailed Description

Detailed Description

... the present invention provides receivers with the capability to more accurately synchronize to a radio **signal** in **varying channel conditions**, e.g., when the receiver is moving rapidly, when the receiver enters a structure, etc...

34/5,K/22 (Item 3 from file: 349)

DIALOG(R) File 349: PCT FULLTEXT

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00924316 \*\*Image available\*\*

APPARATUS AND METHOD FOR OPERATING A SUBSCRIBER INTERFACE IN A FIXED WIRELESS SYSTEM

APPAREIL ET PROCEDE PERMETTANT DE FAIRE FONCTIONNER UNE INTERFACE D'ABONNE DANS UN SYSTEME SANS FIL FIXE

Patent Applicant/Assignee:

RAZE TECHNOLOGIES INC, 2540 East Plano Parkway, Suite 188, Plano, TX 75074, US, US (Residence), US (Nationality)

Inventor(s):

STRUHSAKER Paul F, 5304 Brouette Court, Plano, TX 75023, US, MCKOWN Russell C, 1104 Pittsburg Landing, Richardson, TX 75080, US, Legal Representative:

MUNCK William A (et al) (agent), Novakov, Davis & Munck, P.C., 900 Three Galleria Tower, 13155 Noel Road, Dallas, TX 75240, US,

Patent and Priority Information (Country, Number, Date):

Patent:

WO 200258413 A2-A3 20020725 (WO 0258413)

Application:

WO 2002IB139 20020118 (PCT/WO IB0200139)

Priority Application: US 2001262698 20010119; US 2001839729 20010420

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GO GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: H04Q-007/20

International Patent Class: H04L-001/00 ; H04Q-007/30

Publication Language: English

Filing Language: English Fulltext Availability: Detailed Description

Claims

Fulltext Word Count: 5888

### English Abstract

An apparatus, and an associated method, operates upon bursts of data signals received at a base station (110) in a fixed wireless access communication system (100). A controller (314) is provided in a base transceiver station that is capable of causing cyclo-stationary adaptive filtering to be performed upon successive bursts of data signals received at the base station (110). The cyclo-stationary filtering is performed to facilitate improved speed and accuracy by which the bursts are acted upon by the demodulator portion of a modem (302/304) positioned at the base station (110).

### French Abstract

L'invention concerne un appareil, et un procede associe, fonctionnant sur des salves de signaux de donnees recus au niveau d'une station de base (110) dans un systeme de communication (100) a acces sans fil fixe. Une unite de commande (314) est disposee dans une station emettrice-receptrice de base qui peut provoquer la mise en oeuvre d'un filtrage adaptatif cyclo-stationnaire sur des salves successives de signaux de donnees recus au niveau de la station de base (110). Ce filtrage cyclo-stationnaire est realise de sorte a permettre une vitesse et une precision ameliorees de traitement des salves par la partie de demodulateur d'un modem (302/304) place au niveau de la station de base (110).

Legal Status (Type, Date, Text)

Publication 20020725 A2 Without international search report and to be republished upon receipt of that report.

Search Rpt 20021114 Late publication of international search report

Republication 20021114 A3 With international search report. Republication 20021114 A3 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments. Examination 20040513 Request for preliminary examination prior to end of 19th month from priority date International Patent Class: H04L-001/00 ... Fulltext Availability: Detailed Description Detailed Description on the uplink data signal is improved because the prQfile was updated as the data signal 's channel conditions changed . Cyclo-stationary adaptive filtering (CSAF) is performed upon the uplink data burst signal. CSAF is a signal processing... 34/5/23 (Item 4 from file: 349) DIALOG(R) File 349: PCT FULLTEXT (c) 2004 WIPO/Univentio. All rts. reserv. 00861649 \*\*Image available\*\* AUDIBLE ERROR DETECTOR AND CONTROLLER UTILIZING CHANNEL QUALITY DATA AND ITERATIVE SYNTHESIS DETECTEUR ET SUPPRESSEUR D'ERREURS AUDIBLES UTILISANT DES DONNEES DE QUALITE DU CANAL ET LA SYNTHESE ITERATIVE Patent Applicant/Assignee: NOKIA MOBILE PHONES LTD, Keilalahdentie 4, FIN-02150 Espoo, FI, FI (Residence), FI (Nationality) NOKIA INC, 6000 Connection Drive, Irving, TX 75039, US, US (Residence), US (Nationality), (Designated only for: LC) Inventor(s): VAINIO Janne, Laurintie 16 C, FIN-33880 Lempaala, FI, MIKKOLA Hannu J, Ippisenkatu 15, FIN-33300 Tampere, FI, ROTOLA-PUKKILA Jani, Lehvankatu 24 E 44, FIN-33820 Tampere, FI, Legal Representative: MAGUIRE Francis J (agent), Ware, Fressola, Van Der Sluys & Adolphson LLP, 755 Main Street, P.O. Box 224, Monroe, CT 06468, US, Patent and Priority Information (Country, Number, Date): Patent: WO 200195313 A1 20011213 (WO 0195313) Application: WO 2001IB965 20010604 (PCT/WO IB0100965) Priority Application: US 2000209860 20000607 Designated States: (Protection type is "patent" unless otherwise stated - for applications prior to 2004) AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW (EA) AM AZ BY KG KZ MD RU TJ TM Main International Patent Class: G10L-019/00 International Patent Class: H04L-001/00; H04L-001/20; H03M-013/45 Publication Language: English

Filing Language: English Fulltext Availability: Detailed Description

Claims

Fulltext Word Count: 4659

Appliant?

### English Abstract

An apparatus and method for detecting and controlling audible errors in a sound communication system at the receiver utilizes channel quality data and also iterative synthesis. Errors occurring in synthesized speech are detected by searching for atypical sound with a stringency dependent upon channel quality. The greater the channel quality deficiency is, the higher the typically standards will be. Errors are controlled by either re - synthesizing the signal in an interative way using typically standards which vary with channel quality deficiency, or by modifying the output signal using typicality standards which vary with channel quality deficiency, or both.

### French Abstract

Cette invention se rapporte a un appareil et a un procede servant a detecter et a supprimer les erreurs audibles dans un systeme de communication sonore au niveau du recepteur et qui utilisent a cet effet des donnees de qualite du canal ainsi que la synthese iterative. Les erreurs se produisant dans une parole synthetisee sont detectees par recherche des sons atypiques avec une rigueur qui depend de la qualite du canal. Plus la deficience de la qualite du canal est grande, plus les normes de typicite sont elevees. Les erreurs sont supprimees par resynthese du signal en mode iteratif a l'aide de normes de typicite qui varient avec la deficience de la qualite du canal et/ou par modification du signal de sortie a l'aide de normes de typicite qui varient avec la deficience de la qualite du canal.

Legal Status (Type, Date, Text)
Publication 20011213 A1 With international search report.
Publication 20011213 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

? t34/5,k/25-27,29

34/5,K/25 (Item 6 from file: 349)

DIALOG(R) File 349: PCT FULLTEXT

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00802010 \*\*Image available\*\*

METHOD AND APPARATUS FOR TRANSMISSION AND RECEPTION OF FM IN-BAND ON-CHANNEL DIGITAL AUDIO BROADCASTING

PROCEDE ET APPAREIL DE TRANSMISSION ET DE RECEPTION DE FM DANS UN SYSTEME DE RADIODIFFUSION AUDIO NUMERIQUE SUR VOIE DE TRANSMISSION DANS LA BANDE

Patent Applicant/Assignee:

IBIQUITY DIGITAL CORPORATION, Suite 202, 8765 Stanford Boulevard, Columbia, MD 21045, US, US (Residence), US (Nationality)

Inventor(s):

KROEGER Brian William, 12813 Amberwoods Way, Sykesville, MD 21784, US, BAIRD Jeffrey S, 10882 Olde Woods Way, Columbia, MD 21044, US,

Legal Representative:

LENART Robert P (agent), Eckert Seamans Cherin & Mellott, LLC, 44th floor, 600 Grant Street, Pittsburgh, PA 15219, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200135556 A2-A3 20010517 (WO 0135556)

Application: WO 2000US42061 20001110 (PCT/WO US0042061)

Priority Application: US 99438148 19991110

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: H04H-001/00

International Patent Class: H04L-027/26; H04L-001/00

Publication Language: English

Filing Language: English Fulltext Availability: Detailed Description

Claims

Fulltext Word Count: 6642

### English Abstract

A method for transmission of data in a digital audio broadcasting system includes the steps of providing a plurality of orthogonal frequency division multiplexed sub-carriers, with the sub-carriers including data sub-carriers and reference sub-carriers, and modulating the data sub-carriers with a digital signal representative of information to be transmitted. The reference sub-carriers are modulated with a sequence of timing bits, wherein the sequence of timing bits includes an unambiguous block synchronization word, and the number of bits comprising the block synchronization word is less than one half of the number of bits in said timing sequence. Then the orthogonal frequency division multiplexed sub-carriers are transmitted. Receivers that differentially detect the block synchronization word and use the block synchronization word to coherently detect the digital signal representative of information to be transmitted are also included.

### French Abstract

L'invention concerne un procede de transmission de donnees dans un systeme de radiodiffusion audio numerique consistant a fournir une pluralite de sous-porteuses multiplexees a division de frequence orthogonale, lesdites sous-porteuses comprenant des sous-porteuses de donnees et des sous-porteuses de reference, et a moduler les sous-porteuses de donnees par un signal numerique representatif des informations a transmettre. Les sous-porteuses de reference sont modulees par une sequence de bits de synchronisation, cette sequence comprenant un mot de synchronisation des blocs non ambigu, et le nombre de bits comprenant le mot de synchronisation des blocs etant inferieur a la moitie du nombre de bits dans ladite sequence de synchronisation. Les sous-porteuses multiplexees a division de frequence orthogonale sont alors transmises. L'invention prevoit egalement des recepteurs qui detectent de facon differentielle le mot de synchronisation des blocs et utilisent ce dernier pour detecter de facon coherente le signal numerique representatif des informations a transmettre.

Legal Status (Type, Date, Text)
Publication 20010517 A2 Without international search report and to be republished upon receipt of that report.

Examination 20010907 Request for preliminary examination prior to end of 19th month from priority date

Search Rpt 20011004 Late publication of international search report Republication 20011004 A3 With international search report.

...International Patent Class: H04L-001/00 Fulltext Availability:
Detailed Description

### Detailed Description

... QPSK subcarrier symbols is employed to minimize losses over the channel. Since the interference and **signal levels vary** over the subcarriers (frequency) and time due to selective fading, timely **channel state** 1 5 information (CSI) is needed to adaptively adjust the weighting for the soft-symbols...

34/5, K/26(Item 7 from file: 349) DIALOG(R) File 349: PCT FULLTEXT (c) 2004 WIPO/Univentio. All rts. reserv. 00504399 \*\*Image available\*\* ELECTRONIC COMMUNICATIONS SYSTEM AND METHOD PROCEDE ET SYSTEME DE COMMUNICATIONS ELECTRONIQUE Patent Applicant/Assignee: POCKETSCIENCE INC, Inventor(s): PERETZ Neil M, FULLAM Scott F, CHEN Zong Bo, Patent and Priority Information (Country, Number, Date): Patent: WO 9935751 A1 19990715 Application: WO 99US410 19990107 (PCT/WO US9900410) Priority Application: US 983203 19980107 Designated States: (Protection type is "patent" unless otherwise stated - for applications prior to 2004) AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD Main International Patent Class: H03M-013/00 International Patent Class: H04L-001/18 Publication Language: English Fulltext Availability: Detailed Description Claims Fulltext Word Count: 17782

### English Abstract

A system for communicating data between a computer (20) and a unit remote (22) from the computer (22) is provided, comprising receiving input information from a user in the remote unit (22) and for producing data signals corresponding to the input information, producing error corrected message signals from the data signals, generating acoustical tones corresponding to the error corrected message signals, communicating said acoustical tones over a first communications link (24), said first communications link (24) being bi-directional so that the remote unit (22) communicates data with the computer (20), and receiving acoustic tones over said first communications link (24) from the computer (20),

the acoustical tones being adjusted for the conditions of the first communication link (24) prior to transmission to the remote unit (22). The remote unit (22) may also receive data from the computer (20) over a second communications link (36), which is independent of the first communications link (24) so that the remote unit receives data from two different communications links.

### French Abstract

L'invention porte sur un systeme permettant de transmettre des donnees entre un ordinateur (20) et une unite situee a distance (22) de l'ordinateur (22). Ce systeme comprend des informations d'entree provenant d'un utilisateur de l'unite a distance (22) et permet de generer des signaux de donnees correspondant aux informations d'entree, des signaux de messages de correction d'erreur provenant des signaux de donnees, des tonalites acoustiques correspondant aux signaux de messages de correction d'erreur, de transmettre ces tonalites acoustiques sur une premiere liaison (24) de communications, cette premiere liaison (24) etant bidirectionnelle de sorte que l'unite a distance (22) communique des donnees avec l'ordinateur (20), et de recevoir sur cette premiere liaison (24) de communications des tonalites acoustiques provenant de l'ordinateur (20), les tonalites acoustiques etant ajustees aux etats de la premiere liaison (24) de communications avant de realiser une transmission vers l'unite a distance (22). L'unite a distance (22) peut egalement recevoir des donnees provenant de l'ordinateur (20) sur une seconde liaison (36) de communications, independante de la premiere (24), de facon a recevoir des donnees des deux liaisons de communications differentes.

Main International Patent Class: H03M-013/00 International Patent Class: H04L-001/18 Fulltext Availability:
Detailed Description

### Detailed Description

... error corrected data. The adjustments based on the incoming signal may also be used to adjust the signal transmitter 538 so that the data being transmitted to the handheld unit may be pre-adjusted for the line conditions. Thus, the signals received by the handheld unit from the server should appear unaffected by the line conditions since the signal have already been pre-adjusted for the line conditions. In this manner...

34/5,K/27 (Item 8 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00437218 \*\*Image available\*\*

RECEIVER DECODER CIRCUITRY, AND ASSOCIATED METHOD, FOR DECODING A CHANNEL ENCODED SIGNAL

CIRCUITS RECEPTEUR-DECODEUR ET PROCEDE AFFERENT AUX FINS DU DECODAGE DE SIGNAL CODE DE CANAL

Patent Applicant/Assignee: ERICSSON INC,

Inventor(s):

KHAYRALLAH Ali S,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9827682 A1 19980625

Application: WO 97US22864 19971212 (PCT/WO US9722864)

Priority Application: US 96767542 19961216

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Main International Patent Class: H04L-001/20

International Patent Class: H04L-01:00

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 5763

### English Abstract

Decoder circuitry, and an associated method, decodes an encoded signal received at a receiver. A determination is made of the levels of distortion introduced upon a signal during its transmission to a receiver upon a nonideal communication channel. If the communication channel introduces moderate amounts of distortion upon the signal, a complex decoding technique such as a standard trellis decoding technique is utilized to decode the signal. If the channel is determined to introduce only small levels of distortion upon the signal, a relatively simple, decoding technique is instead utilized.

### French Abstract

Ce circuit decodeur et le procede afferent permettent un decodage de signal code recu par un recepteur. Il est procede a une determination des niveaux de distorsion introduits sur un signal durant la transmission de celui-ci vers un recepteur via un canal de communication non-ideal. Si le canal de communication introduit des distorsions de niveau modere sur le signal, une technique de decodage complexe, un decodage en treillis normalise notamment, est utilisee pour decoder le signal. S'il s'avere que le canal n'introduit que des niveaux reduits de distorsion, il est fait appel a une technique de decodage relativement simple.

Main International Patent Class: H04L-001/20 Fulltext Availability:

Detailed Description

Detailed Description

... technique. The plot

18 is formed by plotting the bit error rate of a decoded signal responsive to changing channel conditions utilizing a simple decoding technique, such as a right inverse matrix operation corresponding to, and...

34/5,K/29 (Item 10 from file: 349)

DIALOG(R) File 349: PCT FULLTEXT

(c) 2004 WIPO/Univentio. All rts. reserv.

00400918 \*\*Image available\*\*

SOURCE/CHANNEL ENCODING MODE CONTROL METHOD AND APPARATUS PROCEDE ET APPAREIL DE COMMANDE DE MODE DE CODAGE DE SOURCE/VOIE Patent Applicant/Assignee:

TELEFONAKTIEBOLAGET LM ERICSSON (publ),

Inventor(s):

EKUDDEN Erik, MINDE Tor Bjorn, HELLWIG Karl, SUNDQVIST Jim,

Patent and Priority Information (Country, Number, Date):

Patent:

WO 9741662 A1 19971106

Application:

WO 97SE613 19970411 (PCT/WO SE9700613)

Priority Application: SE 961606 19960426

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN YU GH KE LS MW SD SZ UG AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL

PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Main International Patent Class: H04L-001/20

International Patent Class: G10L-09:18

Publication Language: English

Fulltext Availability: Detailed Description

Claims

Fulltext Word Count: 3408

### English Abstract

A source/channel encoding mode control method in a TDMA radio communication system determines (20) the current type of source signal to be encoded and transmitted, restricts (22) encoding to a class of source/channel encoding modes compatible with the determined type of source signal, determines (24) a quality measure for previously transmitted signals that have been received and decoded, and selects (30), based on the quality measure, the most suitable source/channel encoding mode for the determined class.

### French Abstract

Ce procede de commande de mode de codage de source/voie dans un systeme de radiocommunication AMRT determine (20) le type courant du signal source a coder et a transmettre, limite (22) le codage a une categorie de modes de codage de source/voie compatible avec le type de signal source determine, determine (24) une mesure de qualite pour des signaux transmis precedemment qui ont ete recus et decodes et selectionne (30), en fonction de la mesure de qualite, le mode de codage de source/voie le plus approprie pour la categorie determinee.

Main International Patent Class: H04L-001/20 Fulltext Availability:
Detailed Description

### Detailed Description

... of source and channel encoding algorithm. That is, regardless of the changing character of the **speech signal** and the **changing** radio **conditions** an allocated source/ **channel** encoding is **mode** will be maintained for the duration of a call.

However, for certain input source signals...

46/5,K/4 (Item 4 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

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01430673

Circuit arrangement for detecting the state of at least one electrical actuating element

Schaltungsanordnung zur Erfassung des Zustandes von mindestens einem elektrischen Betatigungselement

Disposition de circuit pour detecter l'etat d'au moins un element d'actuation electrique

PATENT ASSIGNEE:

SIEMENS AKTIENGESELLSCHAFT, (200520), Wittelsbacherplatz 2, 80333 Munchen , (DE), (Applicant designated States: all)

INVENTOR:

Murr, Robert, Emmeramsweg 11, 93092 Barbing, (DE)

PATENT (CC, No, Kind, Date): EP 1209477 A2 020529 (Basic)

APPLICATION (CC, No, Date): EP 2001119846 010816;

PRIORITY (CC, No, Date): DE 10047907 000927

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: G01R-031/28

### ABSTRACT EP 1209477 A2 (Translated)

Switching element condition detecting circuit in motor vehicle, detects switching condition of MOSFETs, based on which operating state of circuit is changed and output signal is emitted

The N-channel MOSFETs (S1-S4) connected to a signal input (IN) has different contact resistances (R7-R9,R5) in a switched-on state. The MOSFETs change the active/inactive operating state of the circuit based on its switching condition. A signal output (OUT) emits an output signal, when the MOSFETs are in the active operating state.

TRANSLATED ABSTRACT WORD COUNT: 78

### ABSTRACT EP 1209477 A2

Schaltungsanordnung zur Erfassung des Zustandes von mindestens einem elektrischen Betatigungselement (S1, S2, S3, S4), mit einem Signaleingang (IN) zur Aufnahme eines den Zustand des Betatigungselements (S1, S2, S3, S4) wiedergebenden Eingangssignals, einem Signalausgang (OUT) zur Abgabe eines den Zustand des Betatigungselements (S1, S2, S3, S4) wiedergebenden Ausgangssignals, einem Steuerausgang zur Abgabe eines Aktivierungssignals (WAKE-UP-SIGNAL) fur eine Auswertungseinheit ((mu)C), um die Auswertungseinheit ((mu)C) von einem inaktiven Betriebszustand in einen aktiven Betriebszustand zu versetzen, sowie einer eingangsseitig mit dem Signaleingang (IN) und ausgangsseitig mit dem Steuerausgang verbundenen Steuereinheit (C1, D1, R6) zur Erzeugung des Aktivierungssignals (WAKE-UP-SIGNAL) in Abhangigkeit von dem Eingangssignal, wobei das an dem Signaleingang (IN) anliegende Eingangssignal ein analoges Signal ist, wobei die Steuereinheit das Aktivierungssignal (WAKE-UP-SIGNAL) fur die Auswertungseinheit ((mu)C) erzeugt, wenn das Eingangssignal innerhalb eines vorgegebenen Wertebereichs liegt.

ABSTRACT WORD COUNT: 131

NOTE:

Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 020529 A2 Published application without search report LANGUAGE (Publication, Procedural, Application): German; German

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FULLTEXT AVAILABILITY:
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Available Text Language Update Word Count CLAIMS A (German) 200222 465

SPEC A (German) 200222 1691 Total word count - document A 2156

Total word count - document B 0

Total word count - documents A + B 2156

### ...ABSTRACT Translated)

Switching element condition detecting circuit in motor vehicle, detects switching condition of MOSFETs, based on which operating state of circuit is changed and output signal is emitted

The N-channel MOSFETs (S1-S4) connected to a signal input (IN) has...

### 46/5,K/6 (Item 6 from file: 348)

DIALOG(R) File 348: EUROPEAN PATENTS

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### 01272884

Spread code allocation method and base station in CDMA cellular network

Verfahren zur Zuweisung von Spreizkodes und Basisstation in einem
zellularem Netzwerk

Methode d'allocation de codes d'etalement et station de base dans un reseau cellulaire

PATENT ASSIGNEE:

NEC CORPORATION, (236690), 7-1, Shiba 5-chome, Minato-ku, Tokyo, (JP), (Applicant designated States: all)

INVENTOR:

Furukawa, Hiroshi, NEC Corporation, 7-1, Shiba 5-chome, Minato-ku, Tokyo, (JP)

Ushirokawa, Akihisa, NEC Corporation, 7-1, Shiba 5-chome, Minato-ku, Tokyo, (JP)

LEGAL REPRESENTATIVE:

VOSSIUS & PARTNER (100314), Siebertstrasse 4, 81675 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 1096710 A2 010502 (Basic)

EP 1096710 A3 030903

APPLICATION (CC, No, Date): EP 2000123393 001031;

PRIORITY (CC, No, Date): JP 99311603 991101

DESIGNATED STATES: DE; FI; FR; GB; IT; SE

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: H04J-013/00; H04B-007/26; H04L-001/00

### ABSTRACT EP 1096710 A2

A spread code allocation method in a CDMA cellular having a first code set including a plurality of first codes and a second code set including one or a plurality of second codes, allocating the second code to the first code set and multiplying the plurality of first codes by the allocated second code to generate a plurality of combined codes, assigning a priority to the combined code for each transmission signal to be transmitted from a base station to a mobile station, allocating the combined code to the transmission signal based on the priority, and diffusing the transmission signal by the allocated combined code to transmit the diffused transmission signal to the mobile station.

ABSTRACT WORD COUNT: 116

NOTE:

Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 010502 A2 Published application without search report

Search Report: 030903 A3 Separate publication of the search report Examination: 030924 A2 Date of request for examination: 20030729 Examination: 040102 A2 Date of dispatch of the first examination

report: 20031112

Change: 040630 A2 Title of invention (German) changed: 20040513 LANGUAGE (Publication, Procedural, Application): English; English FULLTEXT AVAILABILITY:

Available Text Language

Word Count Update CLAIMS A (English) 200118 3512 9449 SPEC A (English) 200118 Total word count - document A 12961 Total word count - document B 0 Total word count - documents A + B 12961

...INTERNATIONAL PATENT CLASS: H04L-001/00

... SPECIFICATION Then, a combined code having a higher priority is given preference for allocation to transmission signals . Here, change a priority for each transmission signal . More specifically, change a priority for each transmission signal based on channel quality value information and required quality value information from a mobile station.

In the following, a...

#### 46/5,K/7 (Item 7 from file: 348)

DIALOG(R) File 348: EUROPEAN PATENTS

(c) 2004 European Patent Office. All rts. reserv.

01146056

Symbol synchronisation for multicarrier signals Synchronisierung von Symbolen fur Mehrtragersignale Synchronisation de symboles pour signaux multiporteurs PATENT ASSIGNEE:

MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD., (216880), 1006, Ohaza Kadoma, Kadoma-shi, Osaka 571-8501, (JP), (Applicant designated States: all) INVENTOR:

Sudo, Hiroaki, 508, Saeda-cho, Tsuzuki-ku, Yokohama-shi, Kanagawa 224-0054, (JP)

LEGAL REPRESENTATIVE:

Grunecker, Kinkeldey, Stockmair & Schwanhausser Anwaltssozietat (100721) , Maximilianstrasse 58, 80538 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 999676 A2 000510 (Basic)

EP 999676 A3 020904

APPLICATION (CC, No, Date): EP 99121877 991104;

PRIORITY (CC, No, Date): JP 98316699 981106

DESIGNATED STATES: DE; FR; GB; SE

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: H04L-027/26

ABSTRACT EP 999676 A2

Delay circuits 409 and 410 delay a digital baseband signal received by one symbol. Complex multiplier 411 performs a complex multiplication using the received digital baseband signal and the signal delayed by delay circuits 409 and 410. Of the multiplication result of complex multiplier 411, second accumulator 412 outputs the value resulting from an accumulation of the multiplication result of the phase reference symbol in the received digital baseband signal and that of the last half of the synchronization symbol in the delayed signal to frequency offset detector 413.

ABSTRACT WORD COUNT: 90 NOTE:

Figure number on first page: 4

LEGAL STATUS (Type, Pub Date, Kind, Text): Application:

000510 A2 Published application without search report Search Report: 020904 A3 Separate publication of the search report 030102 A2 Date of request for examination: 20021028 Examination: 030402 A2 Date of dispatch of the first examination Examination:

report: 20030219

LANGUAGE (Publication, Procedural, Application): English; English; English FULLTEXT AVAILABILITY:

Available Text Language Update Word Count CLAIMS A (English) 200019 392 SPEC A (English) 200019 6185 Total word count - document A 6577 Total word count - document B 0

... CLAIMS to claim 1, comprising:

Total word count - documents A + B

quality measuring means(1201) for measuring channel quality of a reception signal; and

accumulation period change means(1202-1204) for changing the length of the frequency offset accumulation period based on the channel quality measured.

6577

- 4. The OFDM communication apparatus according to claim 1, comprising averaging means (1501) for...
- ...method according to claim 7, comprising the steps of: measuring channel quality of a reception signal; and changing the length of the frequency offset accumulation period based on the **channel** quality measured.

#### 46/5,K/8 (Item 8 from file: 348)

DIALOG(R) File 348: EUROPEAN PATENTS

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### 01134537

Setting of quantisation levels in multicarrier receivers Einstellung von Quantisierungspegeln in Mehrtragerempfangern Etablissement de seuils de quantification dans des recepteurs multiporteurs PATENT ASSIGNEE:

BRITISH BROADCASTING CORPORATION, (215360), Broadcasting House, London W1A 1AA, (GB), (Applicant designated States: all) INVENTOR:

Stott, Jonathan Highton, c/o BBC R&D, Kingswood Warren, Surrey, KT20 6 NP, (GB)

Robinson, Adrian Paul, c/o BBC R&D, Kingswood Warren, Tadworth, Surrey, KT20 6NP, (GB)

Haffenden, Oliver Paul, c/o BBC R&D, Kingswood Warren, Surrey, KT20 6NP, (GB)

Clarke, Christopher Keith Perry, c/o BBC R&D, Kingswood Warren, Tadworth, Surrey, KT20 6NP, (GB)

Mitchell, Justin David, c/o BBC R&D, Kingswood Warren, Surrey, KT20 6NP, (GB)

LEGAL REPRESENTATIVE:

Abnett, Richard Charles (27531), REDDIE & GROSE 16 Theobalds Road, London WC1X 8PL, (GB)

PATENT (CC, No, Kind, Date): EP 991239 A2 000405 (Basic)

EP 991239 A3 030820

APPLICATION (CC, No, Date): EP 99307679 990929; PRIORITY (CC, No, Date): GB 9821385 981001

DESIGNATED STATES: BE; DE; FR; GB; IT

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: H04L-027/26; H04L-025/06; H04L-027/38

### ABSTRACT EP 991239 A2

A measurement of channel state is obtained for each carrier of a COFDM signal and is used to vary the discrimination levels of a soft-decision quantiser (26) which feeds a Viterbi decoder (30). The channel state information is obtained from the 64-QAM signal by quantising the input with a hard-decision quantiser (44 - Figure 5) and obtaining the difference between the quantised and unquantised signal (46,48). The channel state information is applied through a symbol-delay recursive filter (64) to a control circuit (80). The output of the control circuit directly controls the soft-decision quantisers (26) by varying their discrimination levels. The control circuit includes a logarithm circuit (84 - Figure 7) and a multiply-by-two circuit (90). The method is applicable to receivers for digital audio broadcasting (DAB) or digital video broadcasting (DVB-T) signals.

ABSTRACT WORD COUNT: 134

FULLTEXT AVAILABILITY:

NOTE:

Figure number on first page: 8

LEGAL STATUS (Type, Pub Date, Kind, Text):

Change: 030820 A2 International Patent Classification changed:

20030701

Application: 20000405 A2 Published application without search report Search Report: 030820 A3 Separate publication of the search report Examination: 040421 A2 Date of request for examination: 20040220 LANGUAGE (Publication, Procedural, Application): English; English

Available Text Language Update Word Count

CLAIMS A (English) 200014 1086 SPEC A (English) 200014 3928 Total word count - document A 5014 Total word count - document B 0 Total word count - documents A + B 5014

- ...CLAIMS 80) coupled to the output of the channel state determining means for providing a control **signal** for **adjusting** the relative amplitudes of the discrimination levels used in the quantising means and the received values as received at the input in **dependence** upon the **channel condition** as measured by the channel state determining means.
  - 8. Apparatus according to claim 7, further...

### 46/5,K/9 (Item 9 from file: 348)

DIALOG(R) File 348: EUROPEAN PATENTS

(c) 2004 European Patent Office. All rts. reserv.

01062646

Transmission power control apparatus and method and radio communication apparatus and method

Vorrichtung und Verfahren zur Steuerung der Sendeleistung und Funkkommunikationssystem und Funkkommunikationsverfahren

Dispositif et procede de controle de puissance d'emission et systeme et procede de radiocommunication

PATENT ASSIGNEE:

MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD., (216880), 1006, Ohaza Kadoma,

```
Kadoma-shi, Osaka 571-8501, (JP), (Proprietor designated states: all)
INVENTOR:
  Miya, Kazuyuki, 1132-22, Kamiaso, Asao-ku, Kawasaki-shi, Kanagawa
    215-0021, (JP)
  Hayashi, Masaki, 2-505, Heim Hikari no Oka, 6-2 Hikari no Oka,
    Yokosuka-shi, Kanagawa 239-0847, (JP)
  Kitade, Takashi, 6-2-903, Hikari no Oka, Yokosuka-shi, Kanagawa 239-0847,
    (JP)
LEGAL REPRESENTATIVE:
  Grunecker, Kinkeldey, Stockmair & Schwanhausser Anwaltssozietat (100721)
    , Maximilianstrasse 58, 80538 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 936752 A1 990818 (Basic)
                              EP 936752 B1
                                             020605
APPLICATION (CC, No, Date):
                              EP 99102405 990208;
PRIORITY (CC, No, Date): JP 9844429 980210
DESIGNATED STATES: DE; FR; GB
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: H04B-007/005
CITED PATENTS (EP B): EP 665657 A; EP 683570 A; EP 717508 A; DE 19725438 A;
  US 5604730 A; US 5689815 A
ABSTRACT EP 936752 A1
    The transmission power control apparatus includes a section (101) for
  calculating the reception power of a desired radio wave from the received
  signal, section (102) for storing the reception power above, section
  (105) for storing past transmission power, section (103) for demodulating
  the control signal periodically included in the received signal and
  section (104) for determining the transmission power set value above, and
  determines a transmission power set value using the past transmission
  power, reception power of the desired radio wave and the control signal.
ABSTRACT WORD COUNT: 86
NOTE:
  Figure number on first page: 3
LEGAL STATUS (Type, Pub Date, Kind, Text):
                  010418 Al Title of invention (German) changed: 20010227
Examination:
                  20000202 Al Date of dispatch of the first examination
                            report: 19991215
Oppn None:
                  030528 B1 No opposition filed: 20030306
Change:
                  010425 Al Title of invention (French) changed: 20010306
Change:
                  010425 Al Title of invention (English) changed: 20010306
Change:
                  010425 Al Title of invention (German) changed: 20010306
Change:
                  010418 A1 Title of invention (English) changed: 20010227
Change:
                  010418 Al Title of invention (French) changed: 20010227
Grant:
                  020605 B1 Granted patent
Application:
                  990818 Al Published application with search report
Examination:
                  991201 Al Date of request for examination: 19991005
LANGUAGE (Publication, Procedural, Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language
                           Update
                                     Word Count
      CLAIMS A (English)
                          199933
                                         909
      CLAIMS B (English)
                          200223
                                       683
      CLAIMS B
                 (German)
                          200223
                                       562
      CLAIMS B
                 (French)
                          200223
                                       852
                          199933
      SPEC A
                (English)
                                        6773
      SPEC B
                (English)
                          200223
                                      6746
Total word count - document A
                                      7683
Total word count - document B
                                      8843
Total word count - documents A + B
                                     16526
```

...CLAIMS measuring means (802) for measuring the line quality from the demodulation results of the received **signal** and **change** means (804)

for changing target values such as the reception power and SIR based on the line quality measurement result.

12. A transmission power control method, comprising the steps of storing the reception...

#### 46/5,K/12 (Item 12 from file: 348)

DIALOG(R) File 348: EUROPEAN PATENTS

(c) 2004 European Patent Office. All rts. reserv.

00790403

Wireless base station for cellular radio telephone system with channel quality indication

Schnurlose Feststation fur zellulare Funktelefonanordnung mit Anzeige der Qualitat des Kanals

Station de base fixe sans fil pour un systeme de radiotelephone cellulaire avec indication de la qualite de canal

PATENT ASSIGNEE:

Nokia Corporation, (3988870), Keilalahdentie 4, 02150 Espoo, (FI), (Proprietor designated states: all)

INVENTOR:

Saunders, Robert Stanley, Flat 3, 35 Upper Park Road, Camberley, Surrey GU15 2EG, (GB)

LEGAL REPRESENTATIVE:

Haws, Helen et al (72995), Nokia IPR Department, Nokia House, Summit Avenue, Farnborough, Hampshire GU14 ONG, (GB)

PATENT (CC, No, Kind, Date): EP 736983 A2 961009 (Basic)

EP 736983 A3 EP 736983 B1

APPLICATION (CC, No, Date): EP 96302107 960327;

PRIORITY (CC, No, Date): GB 9507146 950406

DESIGNATED STATES: AT; DE; FR; IT; NL; SE

INTERNATIONAL PATENT CLASS: H04B-007/26; H04B-007/212; H04B-007/155

CITED PATENTS (EP B): EP 274857 A; EP 302455 A

### ABSTRACT EP 736983 A2

A wireless base station operating in a system in which wireless base stations are used to provide a link between a remote fixed part and a handset and method of operation of the same. The wireless base station prevents unnecessary handover initiation by the handset in the event that the link between the wireless base station and remote fixed part is (see image in original document)

ABSTRACT WORD COUNT: 79

NOTE:

Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):

Change: 001227 A2 International Patent Classification changed:

20001107

Application: 961009 A2 Published application (Alwith Search Report

; A2without Search Report)

Oppn None: 031015 B1 No opposition filed: 20030724

Grant: 021023 B1 Granted patent

Assignee: 020313 A2 Transfer of rights to new applicant: Nokia

Corporation (3988870) Keilalahdentie 4 02150

Espoo FI

Examination: 010822 A2 Date of request for examination: 20010627 Search Report: 001227 A3 Separate publication of the search report Examination: 020306 A2 Date of dispatch of the first examination

report: 20020118

Change: 020731 A2 Designated contracting states changed 20020611 Change: 021106 B1 Legal representative(s) changed 20020918 LANGUAGE (Publication, Procedural, Application): English; English; English FULLTEXT AVAILABILITY:

Available Text Language Update Word Count CLAIMS A (English) EPAB96 929 CLAIMS B (English) 200243 961 CLAIMS B 200243 947 (German) CLAIMS B (French) 200243 1170 SPEC A (English) EPAB96 4138 SPEC B (English) 200243 4098 Total word count - document A 5068 Total word count - document B 7176 Total word count - documents A + B 12244

- ...CLAIMS A wireless base station according to any preceding claim wherein the means for transmitting an adapted signal comprises means for providing a signal capable of providing information on the quality of the channel between the wireless base station and the radio handset.
  - 7. A wireless base station according to any preceding claim...
- ...A method according to any one of claims 13 to 16 wherein the step of adapting a signal comprises providing a signal capable of providing information on the quality of the channel between the wireless base station and the radio handset.
  - 18. A method according to any one of claims 13...
- ...CLAIMS base station (5;6) according to any preceding claim wherein the means for transmitting an adapted signal comprises means for providing a signal capable of providing information on the quality of the channel between the wireless base station and the radio handset.
  - 7. A wireless base station (5;6) according to any...
- ...A method according to any one of claims 13 to 16 wherein the step of adapting a signal comprises providing a signal capable of providing information on the quality of the channel between the wireless base station (5;6) and the radio handset (7).
  - 18. A method according to any one...
- ? t46/5, k/19, 23-27, 29

### 46/5,K/19 (Item 19 from file: 348)

DIALOG(R) File 348: EUROPEAN PATENTS

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### 00221380

Line terminating apparatus.

Leitungsabschlusseinrichtung.

Dispositif terminal de ligne.

PATENT ASSIGNEE:

PLESSEY OVERSEAS LIMITED, (286650), Vicarage Lane, Ilford Essex IGI 4AQ, (GB), (applicant designated states: BE;CH;DE;FR;IT;LI;NL;SE) INVENTOR:

Priest, Christopher Charles Andrew, Flat 2 Guildersfield Hill Road, Taplow Berkshire, (GB)

Walker, Ian, 12 Dunwood Court Boyne Valley Road, Maidenhead Berkshire, (GB)

Hancock, Steven, 34 Learmonth Grove, Edinburgh EH4 1BW, (GB) LEGAL REPRESENTATIVE:

Sorenti, Gino , Intellectual Property Department The Plessey Company plc

2-60 Vicarage Lane, Ilford Essex IG1 4AQ, (GB) PATENT (CC, No, Kind, Date): EP 211675 A2 870225 (Basic)

EP 211073 AZ 070223 (Ba

EP 211675 A3 890426

APPLICATION (CC, No, Date): EP 86306169 860808;

PRIORITY (CC, No, Date): GB 8520034 850809

DESIGNATED STATES: BE; CH; DE; FR; IT; LI; NL; SE

INTERNATIONAL PATENT CLASS: H04Q-011/04; H04M-019/00;

CITED PATENTS (EP A): GB 2120044 A

CITED REFERENCES (EP A):

ELECTRICAL COMMUNICATION, vol. 56, no. 2/3, 1981, pages 218-234, New York, US; M. VAN BRUSSEL: "ITT 1240 digital exchange application to the local network"

IEEE SPECTRUM, vol. 17, no. 6, June 1980, pages 30-33, IEEE, New York, US; D.K. MELVIN: "LSI helps telephones go digital"

AT & T TECHNICAL JOURNAL, vol. 64, no. 1, part 2, January 1985, pages 153-173, AT & T, New York, US; L.A. BAXTER et al.: "Communications and control architecture"

BRITISH TELECOMMUNICATIONS ENGINEERING, vol. 3, no. 4, January 1985, pages 241-244, London, GB; R.C. WARD: "System X: Digital subscriber switching subsystem";

### ABSTRACT EP 211675 A2

To provide facilities to handle many different types of customer line which may be connected to a telephone exchange each line circuit includes adjustable terminating and amplifying devices responsive to signals received from a control unit to adjust (e.g.) line terminating impedance and gain. The line circuits are grouped together with associated group multiplexers and address decoding facilities. Stored parameters held by the control unit may be dynamically updated in response to changes in line condition detected by power feed circuitry in the line circuits, the power feed circuitry being arranged to provide a constant current feed to the line pair and to send AGC signals reflecting increased or decreased line resistance by way of the respective group multiplexer to the control unit. Other facilities of the apparatus include provision of calling signals to line and the provision of subscriber private metering (SPM) signals. Each pulse of dialled digits is detected in the line circuit and multiplexed to the control unit which accumulates the dialled digits forwarding each complete digit to the communications exchange. ABSTRACT WORD COUNT: 178

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 870225 A2 Published application (Alwith Search Report

; A2without Search Report)

Search Report: 890426 A3 Separate publication of the European or

International search report

Examination: 891227 A2 Date of filing of request for examination:

891027

Withdrawal: 900328 A2 Date on which the European patent application

was withdrawn: 900103

\*Withdrawal: 900404 A2 Date on which the European patent application

was withdrawn (change): 900103

LANGUAGE (Publication, Procedural, Application): English; English; English FULLTEXT AVAILABILITY:

Available Text Language Update Word Count

CLAIMS A (English) EPABF1 1040

SPEC A (English) EPABF1 4610

Total word count - document A 5650

Total word count - document B 0

Total word count - documents A + B 5650

<sup>...</sup>CLAIMS terminating apparatus as claimed in claim 1 wherein the stored

data parameters include data parameters relating to loop conditions of each line pair.

3. Line terminating apparatus as claimed in claim 2 wherein said data parameters relating to loop conditions are used to adjust amplification of signals received from or sent to said line pairs.

4. Line terminating apparatus as claimed in...

# 46/5,K/23 (Item 23 from file: 349) DIALOG(R)File 349:PCT FULLTEXT

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01028864 \*\*Image available\*\*

# METHOD AND APPARATUS FOR A MIMO-OFDM COMMUNICATION SYSTEM ATTRIBUTION DE RESSOURCES POUR SYSTEMES DE COMMUNICATION MIMO-OFDM Patent Applicant/Assignee:

QUALCOMM INCORPORATED, 5775 Morehouse Drive, San Diego, CA 92121, US, US (Residence), US (Nationality)

Inventor(s):

WALTON Jay Rod, 7 Ledgewood Drive, Westford, MA 01886, US, KETCHUM John W, 37 Candleberry Lane, Harvard, MA 01451, US, WALLACE Mark, 4 Madel Lane, Bedford, MA 01730, US,

MEDVEDEV Irina, 68 Liberty Avenue, #2, Somerville, MA 02114, US, Legal Representative:

WADSWORTH Philip R (et al) (agent), QUALCOMM Incorporated, 5775 Morehouse Drive, San Diego, CA 92121, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200358871 Al 20030717 (WO 0358871)

Application: WO 2002US41756 20021231 (PCT/WO US0241756)

Priority Application: US 200242529 20020108

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: H04L-001/06

International Patent Class: H04L-005/02

Publication Language: English

Filing Language: English Fulltext Availability:
Detailed Description

Claims

Fulltext Word Count: 32869

### English Abstract

Techniques to assign terminals for data transmission in a MIMO-OFDM system. A scheduler forms sets of terminals, called a hypothesis, for data transmission for each of a number of frequency bands. One or more sub-hypotheses may be further formed for each hypothesis, with each sub-hypothesis corresponding to (1) specific assignments of transmit antennas to the terminal(s) in the hypothesis, or, (2) a specific order for processing the uplink data transmissions from the terminal(s). The performance of each sub-hypothesis is then evaluated. One sub-hypothesis is then selected for each frequency band based on the evaluated

performance, and, the set of terminals in each selected sub-hypothesis are then scheduled for data transmission on the corresponding frequency band.

### French Abstract

L'invention porte sur des techniques de programmation de terminaux pour la transmission de donnees sur la liaison descendante et/ou montante d'un systeme MIMO-OFDM en fonction des "signatures" spatiales et ou de frequence des terminaux. Un programmateur forme un ou plusieurs ensembles de terminaux pour une eventuelle transmission de donnees (liaison descendante ou montante) pour chaque bande d'un nombre de bandes de frequence. Une ou plusieurs sous-hypotheses peuvent egalement etre etablies pour chaque hypothese, chaque sous-hypothese correspondant a (1) des affectations specifiques d'antennes de transmission aux terminaux de l'hypothese (pour la liaison descendante) ou (2) un ordre specifique pour le traitement des transmissions de donnees par liaison montante depuis le ou les terminaux (pour la liaison montante). La performance de chaque sous-hypothese est ensuite evaluee (par exemple, sur la base d'une ou plusieurs mesures de performance). Une sous-hypothese est ensuite selectionnee pour chaque bande de frequence sur la base de la performance evaluee, et le ou les terminaux de chaque sous-hypothese evaluee sont ensuite programmes pour la transmission de donnees sur la bande de frequence correspondante.

Legal Status (Type, Date, Text)
Publication 20030717 Al With international search report.
Publication 20030717 Al Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

Correction 20031113 Corrected version of Pamphlet front pages: under (54) published title replaced by correct title under (57) published abstract replaced by correct abstract Republication 20031113 Al With international search report.

Examination 20031211 Request for preliminary examination prior to end of 19th month from priority date

Main International Patent Class: H04L-001/06 Fulltext Availability: Claims

### Claim

- ... in the hypothesis being evaluated and the input signals for each subsequent iteration are the **modified signals** from a preceding iteration.
  - 22 The method of claim 1, wherein each hypothesis is evaluated **based** in part on **channel state** information (CSI) for each terminal in the hypothesis.
  - 23 The method of claim 22, wherein...

# 46/5,K/24 (Item 24 from file: 349) DIALOG(R)File 349:PCT FULLTEXT

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01019317 \*\*Image available\*\*

COMMUNICATION USING SIMULTANEOUS ORTHOGONAL SIGNALS

PROCEDE DE COMMUNICATION FAISANT INTERVENIR DES SIGNAUX ORTHOGONAUX SIMULTANES

Patent Applicant/Assignee:

NORTEL NETWORKS LIMITED, 2351 Boulevard Alfred-Nobel, St. Laurent, Quebec H4S 2A9, CA, CA (Residence), CA (Nationality)

Inventor(s):

STEER David G, 10 Cypress Court, Nepean, Ontario K2H 8Z8, CA, TEO Koon Hoo, 9 Northgate Street, Nepean, Ontario K2G 6C7, CA, KIRKLAND William R, 22 Bon Echo Cr., (Kanata), Ottawa, Ontario K2M 2W5, CA,

Legal Representative:

SMART & BIGGAR (agent), Attn: FAGGETTER, Ronald, D., 438 University Avenue, Suite 1500, Box 111, Toronto, Ontario M5G 2K8, CA,

Patent and Priority Information (Country, Number, Date):

Patent:

WO 200349355 A1 20030612 (WO 0349355)

Application:

WO 2002CA1433 20020918 (PCT/WO CA0201433)

Priority Application: US 2001998193 20011203

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class:  $\rm H04L-005/14$  International Patent Class:  $\rm H04B-001/40$ 

Publication Language: English

Filing Language: English

Fulltext Availability: Detailed Description

Claims

Fulltext Word Count: 10855

### English Abstract

Wireless communication is improved by simultaneously transmitting signals that are orthogonal to received signals. This technique is referred to as Orthogonal Division Duplexing or ODD. Channel characteristics may be estimated based on an analysis of the received signals. Subsequently, techniques used in the transmitting of signals may be adjusted based on the estimated channel characteristics. By using interleaved pilot sub-carriers, each end of a communications link may take measurements of channel conditions. These measurements may be used to adapt the transmission techniques used in the transmitter to the measured channel conditions. Advantageously, this adaptation can occur without the delay in reporting conditions that is characteristic of traditional adaptive communications systems.

### French Abstract

L'invention concerne un procede de communication sans fil ameliore qui consiste a emettre, lors de la reception de signaux, des signaux qui sont orthogonaux aux signaux recus. Cette technique est communement designee sous le terme de duplexage par repartition orthogonale ou ODD. Le procede consiste, par ailleurs, a evaluer les caracteristiques de la voie de communication, sur la base d'une analyse des signaux recus. Les techniques utilisees ensuite pour l'emission des signaux peuvent etre adaptees sur la base des caracteristiques obtenues. Le procede fait egalement intervenir des sous-porteuses pilotes entrelacees permettant a chaque borne d'une liaison de communication de mesurer l'etat des voies de communication. Ces mesures peuvent etre utilisees pour adapter les techniques de transmission utilisees dans l'emetteur a l'etat des voies

de communication. Avantageusement, cette adaptation peut se faire sans induire de decalages, ce qui est propre aux systemes adaptatifs de communication traditionnels.

Legal Status (Type, Date, Text)

Publication 20030612 A1 With international search report.

Examination 20030925 Request for preliminary examination prior to end of 19th month from priority date

### English Abstract

...based on an analysis of the received signals. Subsequently, techniques used in the transmitting of **signals** may be **adjusted** based on the estimated channel characteristics. By using interleaved pilot sub-carriers, each end of a communications **link** may take measurements of **channel conditions**. These measurements may be used to adapt the transmission techniques used in the transmitter to...

### 46/5,K/25 (Item 25 from file: 349)

DIALOG(R) File 349: PCT FULLTEXT

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01011175 \*\*Image available\*\*

MULTIPLE-ACCESS MULTIPLE-INPUT MULTIPLE-OUTPUT (MIMO) COMMUNICATION SYSTEM SYSTEME DE COMMUNICATION A SORTIES MULTIPLES, A ENTREES MULTIPLES (MIMO) ET A ACCES MULTIPLES

Patent Applicant/Assignee:

QUALCOMM INCORPORATED, 5775 Morehouse Drive, San Diego, CA 92121, US, US (Residence), US (Nationality)

Inventor(s):

WALTON Jay R, 7 Ledgewood Drive, Westford, MA 01886, US,

WALLACE Mark, 4 Madel Lane, Bedford, MA 01730, US,

HOWARD Steven J, 75 Heritage Avenue, Ashland, MA 01721, US,

Legal Representative:

WADSWORTH Philip R (et al) (agent), QUALCOMM Incorporated, 5775 Morehouse Drive, San Diego, CA 92121, US,

Patent and Priority Information (Country, Number, Date):

Patent:

WO 200341300 A1 20030515 (WO 0341300)

Application: WO 2002US35364 20021105 (PCT/WO US0235364) Priority Application: US 2001993087 20011106

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: H04B-007/06

International Patent Class: H04B-007/08; H04L-001/06

Publication Language: English

Filing Language: English Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 42100

English Abstract

Techniques to achieve better utilization of the available resources and robust performance for the downlink and uplink in a multiple-access MIMO system. Techniques are provided to adaptively process data prior to transmission, based on channel state information, to more closely match the data transmission to the capacity of the channel. Various receiver processing techniques are provided to process a data transmission received via multiple antennas at a receiver unit. Adaptive reuse schemes and power back-off are also provided to operate the cells in the system in a manner to further increase the spectral efficiency of the system (e.g., reduce interference, improve coverage, and attain high throughput). Techniques are provided to efficiently schedule data transmission on the downlink and uplink. The scheduling schemes may be designed to optimize transmissions (e.g., maximize throughput) for single or multiple terminals in a manner to meet various constraints and requirements.

### French Abstract

L'invention concerne des techniques permettant de realiser une meilleure utilisation des ressources disponibles et la performance de robustesse de liaisons montante et descendante dans un systeme MIMO a acces multiples. Ces techniques permettent de traiter de facon adaptative des donnees avant emission, sur la base d'une information d'etat de canal, afin de faire correspondre plus precisement l'emission de donnees a la capacite du canal. Differentes techniques de traitement de recepteur permettent de traiter une emission de donnees, recue a une unite de reception, via des antennes multiples. Des schemas de reutilisation adaptatives et des reductions de puissance permettent aussi de faire fonctionner les cellules du systeme de maniere a augmenter l'efficacite spectrale du systeme (par exemple, reduction d'interference, amelioration de couverture, et obtention de debit eleve). Des techniques permettent encore de programmer efficacement l'emission de donnees sur les liens montant et descendant. Les schemas de programmation peuvent etre concus afin d'optimiser les emissions (par exemple, maximisation de debit) pour des terminaux uniques ou multiples de maniere a satisfaire a des besoins et a des contraintes varies.

Legal Status (Type, Date, Text)
Publication 20030515 Al With international search report.
Examination 20030807 Request for preliminary examination prior to end of 19th month from priority date

...International Patent Class: H04L-001/06 Fulltext Availability:
Detailed Description

### Detailed Description

... estimated channel characteristics may then be reported back to the transmitter unit and used to adjust the signal processing (e.g., coding, modulation, and so on). In this manner, high perfon-nance is achieved based on the determined channel conditions.

[11161 If the number of receive antennas is equal to or exceeds the number of...

46/5,K/26 (Item 26 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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01001035 \*\*Image available\*\*

METHOD AND APPARATUS FOR REDUCING INTERFERENCE IN

### MULTIPLE-INPUT-MULTIPLE-OUTPUT (MIMO) SYSTEMS

# PROCEDE ET APPAREIL POUR REDUIRE LES INTERFERENCES DANS DES SYSTEMES A ENTREES MULTIPLES ET SORTIES MULTIPLES

Patent Applicant/Assignee:

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WINTERS Jack Harriman, 103 Old Wagon Road, Middletown, NJ 07748, US, Legal Representative:

CANAVAN Robert T (et al) (agent), AT & T Corp., P.O. Box 4110, Middletown, NJ 07748-4110, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200330377 A2-A3 20030410 (WO 0330377)

Application: WO 2002US30556 20020926 (PCT/WO US02030556) Priority Application: US 2001325730 20010928; US 2002255441 20020926 Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: H04B-007/06

Publication Language: English

Filing Language: English Fulltext Availability: Detailed Description

Claims

Fulltext Word Count: 9445

### English Abstract

Interference is reduced with a multiple-input-multiple-output (MIMO) system having a set of basestations including a first basestation (11) and a second basestation (171) is reduced. Signals associated with the first basestation having its own antenna elements are received. The first basestation is associated with its own mobile stations each having their own antenna elements (113 and 115). Signals associated with the second basestation having its own antenna elements are received. The second basestation is associated with its own mobile stations (173 and 175) each having their own antenna elements. Signals associated with the first basestation are jointly detected in conjunction with the signals associated with the second basestation to produce a set of detected signals.

### French Abstract

L'invention porte sur la reduction des interferences dans un systeme a entrees multiples et sorties multiples possedant un ensemble de stations de bases comprenant une premiere et une seconde station de base. Le procede consiste a recevoir des signaux associes a la premiere station de base possedant ses propres elements d'antenne, la premiere station de base etant associee a ses propres stations mobiles possedant chacune leurs propres elements d'antennes. Chaque signal associe a la premiere station de base est uniquement associe a une station mobile associee a la premiere station de base. Le procede consiste egalement a recevoir des

signaux associes a la seconde station de base possedant ses propres elements d'antenne, la seconde station de base etant associee a ses propres stations mobiles possedant chacune leurs propres elements d'antenne. Chaque signal associe a la seconde station de base est uniquement associe a une station mobile associee a la seconde station de base. Le procede consiste ensuite a detecter conjointement les signaux associes a la premiere station de base et ceux associes a la seconde station de base de facon a produire un ensemble de signaux detectes.

station de base de facon a produire un ensemble de signaux detectes. Legal Status (Type, Date, Text) Publication 20030410 A2 Without international search report and to be republished upon receipt of that report. 20040401 Late publication of international search report Search Rpt Republication 20040401 A3 With international search report. Fulltext Availability: Claims Claim ... plurality of antenna elements, the signal from the first basestation having its own data, the signal 10 being modified based on a channel state for a second basestation; receiving, at the plurality of antenna elements, a signal from a...its own plurality of antenna elements , comprising: - 31 5 an encoder, the encoder configured to modify a signal sent to the first mobile station based on a channel state of the first mobile station to produce a modified signal ; and a plurality of antenna elements coupled to the encoder, the plurality of antenna elements... 46/5,K/27 (Item 27 from file: 349) DIALOG(R) File 349: PCT FULLTEXT (c) 2004 WIPO/Univentio. All rts. reserv. 00944037 \*\*Image available\*\* METHOD AND APPARATUS FOR UTILIZING CHANNEL STATE INFORMATION IN A WIRELESS COMMUNICATION SYSTEM PROCEDE ET APPAREIL DESTINES A UTILISER UNE INFORMATION D'ETAT DE CANAL DANS UN SYSTEME DE COMMUNICATIONS HERTZIENNES Patent Applicant/Assignee: QUALCOMM INCORPORATED, 5775 Morhouse Drive, San Diego, CA 92121-1714, US, US (Residence), US (Nationality) Inventor(s): LING Funyun, 11382 Wills Creek Road, San Diego, CA 92131, US, WALTON Jay R, 7 Ledgewood Drive, Westford, MA 01886, US, HOWARD Steven J, 75 Heritage Avenue, Ashland, MA 01721, US, WALLACE Mark, 4 Madel Lane, Bedford, MA 01730, US, KETCHUM John W, 37 Candleberry Lane, Harvard, MA 01451, US, Legal Representative: WADSWORTH Philip R (et al) (agent), Qualcomm Incorporated, 5775 Morehouse Drive, San Diego, CA 92121-1714, US, Patent and Priority Information (Country, Number, Date): Patent: WO 200278211 A2-A3 20021003 (WO 0278211)

WO 2002US8733 20020322

(PCT/WO US0208733)

Priority Application: US 2001816481 20010323 Designated States:

Application:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GO GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: H04B-007/08

International Patent Class: H04B-007/06; H04L-001/06

Publication Language: English

Filing Language: English Fulltext Availability: Detailed Description Claims

Fulltext Word Count: 13103

### English Abstract

Techniques for transmitting data from a transmitter unit to a receiver unit in a multiple-input multiple-output (MIMO) communication system. In one method, at the receiver unit, a number of signals are received via a number of receive antennas, with the received signal from the transmitter unit. The received signals are processed to derive channel state information (CSI) indicative of characteristics of a number of transmission channels used for data transmission. The CSI is transmitted back to the transmitter unit. At the transmitter unit, the CSI from the receiver unit is received and data for transmission to the receiver units is processed based on the received CSI.

### French Abstract

L'invention concerne des procedes d'emission de donnees d'un emetteur a un recepteur dans un systeme de communication multi-antennaires a l'emission et a la reception (MIMO). Dans un procede, cote recepteur, un certain nombre de signaux sont recus via un certain nombre d'antennes de reception, le signal recu par chaque antenne de reception comprenant une combinaison d'un ou de plusieurs signaux provenant de l'emetteur. Les signaux recus sont traites afin d'obtenir une information d'etat de canal (CSI) indicatrice des caracteristiques d'un nombre de canaux d'emission utilises pour l'emission de donnees. L'information d'etat de canal est reemise vers l'emetteur. Cote emetteur, l'information d'etat de canal du recepteur est recue et les donnees a emettre vers les recepteurs sont traitees sur la base de l'information d'etat de canal recue.

Legal Status (Type, Date, Text)

Publication 20021003 A2 Without international search report and to be republished upon receipt of that report.

Examination 20030109 Request for preliminary examination prior to end of 19th month from priority date

20030227 Late publication of international search report Search Rpt Republication 20030227 A3 With international search report.

... International Patent Class: H04L-001/06 Fulltext Availability: Detailed Description

### Detailed Description

... data transmission. The CSI is then reported back to the transmitter system and used to adjust the signal processing (e.g., coding, modulation, and so on). In this manner, high performance is achieved

based on the determined channel conditions .

(Item 29 from file: 349)

[1008] A specific embodiment of the invention provides a method for transmitting data from a...estimated channel characteristics may then be reported back to the transmitter system and used to adjust the signal processing (e.g., coding, modulation, and so on). In this manner, high perfonnance is achieved based on the determined channel The receiver processing techniques described herein include a channel correlation matrix inversion (CCMI) technique, an...

### DIALOG(R) File 349: PCT FULLTEXT (c) 2004 WIPO/Univentio. All rts. reserv. 00909272 \*\*Image available\*\* METHOD OF RECONFIGURATION OF RADIO PARAMETERS BASED ON COMMUNICATION CHANNEL MONITORING PROCEDE DE RECONFIGURATION DE PARAMETRES RADIO POUR COMMUNICATIONS A COMPATIBILITE ET ADAPTATION DE PUISSANCE Patent Applicant/Assignee: INNOVATIVE TECHNOLOGY LICENSING LLC, Mail Code A15, P.O. Box 1085, Thousand Oaks, CA 91358-0085, US, US (Residence), US (Nationality) Inventor(s): CHIEN Charles, 673 Camino Del Sol, Newbury Park, CA 91320, US, Legal Representative: JOHNSON William L (et al) (agent), Koppel & Jacobs, Suite 107, 555 St. Charles Drive, Thousand Oaks, CA 91360, US, Patent and Priority Information (Country, Number, Date): WO 200243341 A2-A3 20020530 (WO 0243341) Patent: Application: WO 2001US47698 20011026 (PCT/WO US0147698) Priority Application: US 2000243707 20001026; US 200155261 20011025 Designated States: (Protection type is "patent" unless otherwise stated - for applications prior to 2004) AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW (EA) AM AZ BY KG KZ MD RU TJ TM Main International Patent Class: H04L-025/02 International Patent Class: H04L-025/03; H04L-001/00 ; H04L-001/20 ; H04B-007/005 Publication Language: English Filing Language: English Fulltext Availability: Detailed Description Claims Fulltext Word Count: 5079 English Abstract

46/5,K/29

The invention monitors a communication channel and estimates its characteristics from time to time, thus providing a dynamic estimate of channel characteristics. Based on the channel characteristics, a control processor calculates a preferred configuration of digital (and optionally, analog) signal processing to best manage the available energy for the present channel characteristics. The selected configuration is

then down-loaded into communication modules stored in extra memory during runtime. The communication modules preferably include a one or more of: a reconfigurable forward error correcting codec (with adjustable code lengths and a plurality of code choices); a reconfigurable interleaver with adjustable depth; a decision feedback equalizer (DFE) with a reconfigurable number of taps; maximum likelihood sequence estimator with an adjustable number of states; a frequency hopping coder with an adjustable number of hops or hop rate; and a direct-sequence (or direct sequence spread spectrum) codec with an adjustable number of chips per bit.

### French Abstract

L'invention controle une voie de communication et estime ses caracteristiques de temps en temps, procurant ainsi une estimation dynamique des caracteristiques de la voie. Sur la base des caracteristiques de la voie, un processeur de commande calcule une configuration preferee du traitement du signal numerique (et facultativement analogique) afin de gerer au mieux l'energie disponible pour les caracteristiques de la presente voie. La configuration selectionnee est ensuite telechargee dans des modules de communication stockes dans une memoire supplementaire pendant la duree d'execution. Les modules de communication comprennent de preference un ou plusieurs des elements suivants: un codec de correction d'erreurs sans voie de retour reconfigurable (avec des longueurs de code ajustables et une pluralite de choix de code); un entrelaceur reconfigurable a profondeur reglable; un egaliseur a decision retroactive (DFE) dote d'un certain nombre de prises reconfigurable; un estimateur de sequence de probabilite maximum presentant un certain nombre d'etats reglable; un codeur a saut de frequence ayant un nombre de sauts ou rythme de saut adaptable; et un codec de sequence directe (ou etalement de spectre de sequence directe) ayant un nombre adaptable de puces par bit.

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Legal Status (Type, Date, Text)
Publication 20020530 A2 Without international search report and to be
                       republished upon receipt of that report.
Examination
              20021017 Request for preliminary examination prior to end of
                       19th month from priority date
Search Rpt
              20030227 Late publication of international search report
Republication 20030227 A3 With international search report.
Search Rpt
              20030227 Late publication of international search report
              20030403 Corrections of entry in Section 1: under (30)
Correction
                       replace "Not furnished" by "10/055,261"
Republication 20030403 A3 With international search report.
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... International Patent Class: H04L-001/00 ...

### ... H04L-001/20 Fulltext Availability: Claims

### Claim

1 A method of adaptively reconfiguring a radio architecture for power efficient or adaptive communications based on. communication channel conditions, suitable for use in a reconfigurable radio which allows control of reconfigurable digital signal processing blocks with adjustable parameters, comprising the steps of: estimating the signal to noise ratio (SNR) and signal

? t46/5, k/30-36

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46/5,K/30
               (Item 30 from file: 349)
DIALOG(R) File 349: PCT FULLTEXT
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            **Image available**
METHODS AND APPARATUS FOR TRANSMITTING INFORMATION BETWEEN A BASESTATION
    AND MULTIPLE MOBILE STATIONS
PROCEDES ET APPAREIL PERMETTANT DE TRANSMETTRE DES INFORMATIONS ENTRE UNE
    STATION DE BASE ET DES STATIONS MOBILES MULTIPLES
Patent Applicant/Assignee:
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    designated states except: US)
Patent Applicant/Inventor:
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TSE David N C, 1635 Scenic Ave. #1, Berkeley, CA 94709, US, US
    (Residence), CA (Nationality), (Designated only for: US)
Legal Representative:
  STRAUB Michael P (agent), Straub & Pokotylo, Bldg. 6, Suite 83, 1 Bethany
    Road, Hazlet, NJ 07730, US,
Patent and Priority Information (Country, Number, Date):
  Patent:
                         WO 200223743 A2-A3 20020321 (WO 0223743)
  Application:
                         WO 2001US28322 20010912 (PCT/WO US0128322)
  Priority Application: US 2000232928 20000915; US 2000691766 20001018
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
  EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
  LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL
  TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: H04Q-007/38
Publication Language: English
Filing Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 10564
English Abstract
  Methods and apparatus for scheduling mobile stations (MSs) to download
  data and/or to control the rate of downloading to an MS from a base
  station (BS) as a function of downlink channel condition information are
  described. Artificial channel variations, which can be measured at the
  MS, and feedback to a BS for scheduling purposes, are introduced through
  the use of two or more transmitter antennas at a BS. Each of the antennas
  transmits a signal at the same frequency having the same information
  content, e.g., modulated data. However the signals are mode to differ
  with time in their phase and/or amplitude. Multiple signals having the
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same transmission frequency and information content are received and interpreted as a single composite signal by a receiving MS. The interaction of the received signals and the intentional variations introduced into the signals result an MS detecting different signal amplitudes and/or phases over time even when the total amount of power

used to transmit the combination of the signals having the same information content remains constant with time. Data transmission rates are controlled in some embodiments as a function of channel conditions, e.g., the better the channel conditions the faster the transmission data rate used. By varying the data rate as a function of channel conditions and by preferring MSs with good channel conditions to those with bad channel conditions, improved overall throughput can be achieved by a BS with regard to downlinks as compared to known systems.

### French Abstract

La presente invention concerne des procedes et un appareil permettant de programmer des stations mobiles (MS) pour telecharger des donnees et/ou pour commander le debit de telechargement d'une MS a une station de base (BS) en fonction des informations des conditions du canal de liaison descendante. Des modifications de canal artificielles, qui peuvent etre mesurees a la MS, et une information de retour a la BS pour des raisons de programmation, sont introduites via au moins deux antennes d'emetteur a la BS. Chacune de ces antennes emet un signal de meme contenu (par exemple des donnees modulees), a la meme frequence. Cependant ces signaux sont concus pour differer dans le temps dans leur phase et/ou amplitude. De multiples signaux possedant la meme frequence d'emission et le meme contenu sont recus et interpretes comme un signal composite unique par une MS de reception. L'interaction des signaux recus et les modifications intentionnelles introduites dans ces signaux font qu'une MS detecte des amplitudes et/ou des phases de signal differentes dans le temps meme quand la quantite d'energie totale utilisee pour emettre la combinaison des signaux de meme contenu reste constante dans le temps. Dans certains modes de realisation de l'invention, les debits de transmission de donnees sont commandes en fonction des conditions de canal, par exemple meilleures sont les conditions de canal, plus rapide est le debit de transmission de donnee utilise. En variant le debit des donnees en fonction des conditions de canal et en preferant les MS avec de bonnes conditions de canal par rapport a celles qui en ont de mauvaises, une BS ameliore les rendements pour ce qui concerne ses liaisons descendantes si on compare ces rendements a ceux des systemes connus.

Legal Status (Type, Date, Text)

Publication 20020321 A2 Without international search report and to be republished upon receipt of that report.

Examination 20021121 Request for preliminary examination prior to end of 19th month from priority date

Search Rpt 20030515 Late publication of international search report Republication 20030515 A3 With international search report.

Fulltext Availability: Claims

### Claim

... period in 5 time during which the relative amplitudes of the first and second data **signals** are 6 **varied** . 1 26. The method of claim 25, wherein N is greater than two. 1 27. A communications method, comprising the steps of

2 operating a **base** station to receive **channel condition** information 3 from each of a plurality of mobile stations, the channel condition information 4...

46/5,K/31 (Item 31 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00873200 \*\*Image available\*\*

### MULTICARRIER TRANSMISSION USING POLARIZED ANTENNAE

### TRANSMISSION ADAPTATIVE EN POLARISATION DOUBLE DE SIGNAUX PAR MULTIPLEXAGE FREQUENTIEL ORTHOGONAL

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Inventor(s):

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Legal Representative:

MEADOR Terrance A (et al) (agent), Gray Cary Ware & Freidenrich, 4365 Executive Drive, Suite 1100, San Diego, CA 92121-2133, US,

Patent and Priority Information (Country, Number, Date):

Patent:

WO 200207371 A2-A3 20020124 (WO 0207371)

Application:

WO 2001US18993 20010613 (PCT/WO US0118993)

Priority Application: US 2000616128 20000714

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

BR CA MX

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

Main International Patent Class: H04L-027/26

International Patent Class: H04L-001/02; H04B-014/00; H04L-001/06

Publication Language: English

Filing Language: English Fulltext Availability: Detailed Description

Claims

Fulltext Word Count: 7425

### English Abstract

A system and method is provided for adaptive orthogonal frequency division multiplexed (OFDM) transmission (ADOT). The system and method includes OFDM processing of information symbols and is configured for transmission and reception of OFDM signals on orthogonally polarized antennas. Further, the system and method of the present invention is adaptable to channel conditions. An ADOT transmit system includes a transmit processor configured for a specific OFDM modulation of incoming data symbols to be transmitted based on channel condition data, and a pair or orthogonally polarized transmission antennas. An ADOT receive system includes a receive processor configured for restoring the transmitted OFDM signals according to a transmission mode employed in the transmit system. Continual measurement of the transmission channel yields channel condition data for use in selecting a particular transmission mode.

### French Abstract

L'invention porte sur un systeme et un procede de transmission adaptative en polarisation double (ADOT) de signaux par multiplexage frequentiel orthogonal (OFDM), qui consiste a traiter par OFDM les symboles d'information, et concu pour emettre et recevoir les signaux OFDM a l'aide d'antennes a polarisation orthogonale et pour s'adapter a l'etat des canaux. Le systeme d'emission ADOT utilise un processeur specifique modulant en OFDM les symboles de donnees entrantes a emettre, en fonction de donnees sur l'etat des canaux, ainsi qu'une paire d'antennes emettrices a polarisation orthogonale. Le systeme de reception ADOT utilise un processeur restaurant les signaux OFDM emis en utilisant le mode de transmission du systeme d'emission. Une mesure en continu des

canaux de transmission fournit des donnees sur leur etat permettant de selectionner un mode particulier de transmission.

Legal Status (Type, Date, Text)

Publication 20020124 A2 Without international search report and to be republished upon receipt of that report.

Examination 20020404 Request for preliminary examination prior to end of 19th month from priority date

Search Rpt 20020613 Late publication of international search report

Republication 20020613 A3 With international search report.

Republication 20020613 A3 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

International Patent Class: H04L-001/02 ...

... H04L-001/06

Fulltext Availability:

Claims

Claim

... for selecting one of a plurality of transmission 30 modes of the transmitted RF signals based on the channel conditions, and a memory for storing a plurality of addressable receive signal matrices, the adaptive receive processor configured to map the first and second frequency domain signals to one of...

46/5,K/32 (Item 32 from file: 349)

DIALOG(R) File 349: PCT FULLTEXT

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00846686 \*\*Image available\*\*

DESIRED VOICE DETECTION IN ECHO SUPPRESSION

DETECTION VOCALE VOULUE DANS LA SUPPRESSION D'ECHO

Patent Applicant/Assignee:

ERICSSON INC, 7001 Development Drive, Research Triangle Park, NC 27709, US, US (Residence), US (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

ROMESBURG Eric Douglas, 69B Half Dollar Road, Chapel Hill, NC 27516, US, US (Residence), US (Nationality), (Designated only for: US) Legal Representative:

OWEN John R (et al) (agent), Coats & Bennett, PLLC, P.O. Box 5, Raleigh, NC 27602, US,

Patent and Priority Information (Country, Number, Date):

Patent:

WO 200180439 A1 20011025 (WO 0180439)

Application: WO 2001US7310 20010305 (PCT/WO US0107310)

Priority Application: US 2000549964 20000414

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: H04B-003/23

International Patent Class: H04B-003/20; H04M-009/08

Publication Language: English

Filing Language: English Fulltext Availability: Detailed Description

Claims

Fulltext Word Count: 10010

### English Abstract

A hybrid echo suppresser and associated methods of use provide echo suppression in a bi-directional communications system, while minimizing desired-voice signal disruption. The hybrid echo suppresser includes a linear echo canceller (LEC), a non-linear processor (NLP), and a control circuit. The LEC operates on an echo-causing signal to produce an estimated-echo signal, which is subtracted from an input echo-containing signal, thereby producing an echo-cancelled signal. The NLP operates on this echo-cancelled signal to eliminate residual echo arising from system non-linearities. The control circuit repeatedly compares the echo-containing signal and the estimated-echo signal to determine if the echo-containing signal includes a desired-voice component. If not, the control circuit operates the NLP in an echo-voice mode having substantial signal attenuation. Upon detecting the start or continuation of the desired-voice component, the control circuit switches the NLP such that is has less attenuation and avoids clipping or suppressing the desired voice.

### French Abstract

Un suppresseur d'echo hybride et ses procedes d'utilisation permettent d'annuler l'echo dans un systeme de communications bidirectionnel et de minimiser simultanement l'interruption du signal vocal voulu. Le suppresseur d'echo hybride comprend un annuleur d'echo (LEC), un processeur non lineaire (NLP) et un circuit de commande. Le LEC agit sur un signal induisant un echo, pour produire un signal d'echo estime qui est soustrait d'un signal contenant un echo d'entree, et produire ainsi un signal a echo annule. Le NLP agit sur ledit signal a echo annule pour eliminer l'echo residuel provenant de non linearites de systeme. Le circuit de commande compare a repetition le signal contenant l'echo et le signal a echo estime pour determiner si le signal contenant l'echo comprend une composante vocale voulue. Si ce n'est pas le cas, le circuit de commande utilise le NLP en mode vocal a echo a attenuation sensible du signal. Lors de la detection du debut ou de la suite de la composante vocale voulue, le circuit de commande commute le NLP, de maniere que l'attenuation soit reduite et empeche l'ecretage ou la suppression du signal vocal voulu.

Legal Status (Type, Date, Text)

Publication 20011025 A1 With international search report.

Publication 20011025 Al Before the expiration of the time limit for

amending the claims and to be republished in the

event of the receipt of amendments.

Examination 20020110 Request for preliminary examination prior to end of 19th month from priority date

Fulltext Availability: Detailed Description

Detailed Description

... canceled signal e relating to residual echo.

Such adaptive feedback allows the LEC 144 to continually adjust its

output estimated-echo signal y, however such adjustments lag when echo path conditions are changing rapidly. Advanced methods for dynamically measuring the echo cancellation provided by 46/5,K/33 (Item 33 from file: 349) DIALOG(R) File 349: PCT FULLTEXT (c) 2004 WIPO/Univentio. All rts. reserv. \*\*Image available\*\* METHOD AND APPARATUS FOR USE WITH SUBMERSIBLE ELECTRICAL EQUIPMENT PROCEDE ET APPAREIL A UTILISER AVEC UN EQUIPEMENT ELECTRIQUE SUBMERSIBLE Patent Applicant/Assignee: SCHLUMBERGER TECHNOLOGY CORPORATION, Inventor(s): VENERUSO Anthony F, ROBERTSON Gerald W, Patent and Priority Information (Country, Number, Date): Patent: WO 200029714 A1 20000525 (WO 0029714) Application: WO 99US26627 19991112 (PCT/WO US9926627) Priority Application: US 98193962 19981118 Designated States: (Protection type is "patent" unless otherwise stated - for applications prior to 2004) AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG Main International Patent Class: E21B-034/06 International Patent Class: F16K-031/04 Publication Language: English Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 5789

### English Abstract

A system for use in a subterranean well includes a production tubing (52) and a valve. The production tubing has a port to establish communication between a passageway of the tubing and well fluid from a formation. The valve is mounted to the production tubing and includes a sealed housing (45), a motor (40), a valve cover (36), an actuator drive (32) and a sensor (60). The motor is located inside the housing, and the actuator drive is actuated by the motor to move the valve cover (36) over the port to selectively control the communication of the well fluid between the formation and the passageway of the tubing. The sensor is located inside the housing and adapted to indicate the presence of the fluid inside the housing.

### French Abstract

L'invention concerne un systeme a utiliser dans un puits souterrain, comprenant un tubage de production (52) et une soupape. Le tubage de production dispose d'un orifice permettant d'etablir une communication entre un passage du tubage et le fluide du puits a partir d'une formation. La soupape, montee sur le tubage de production, comprend un boitier etanche (45), un moteur (40), un couvercle (36) de soupape, un actionneur (32) et un capteur (60). Le moteur est loge dans le boitier et l'actionneur est actionne par le moteur afin de deplacer le couvercle (36) de la soupape au-dessus de l'orifice de facon a commander selectivement la communication du fluide du puits entre la formation et le passage du tubage. Le capteur, loge dans le boitier, est concu pour indiquer la presence du fluide a l'interieur dudit boitier.

Fulltext Availability: Claims

Claim
... one
resistor comprises:
a wire.

9 The apparatus of claim 1, further comprising:
a communication link,
wherein the status circuit comprises:
a telemetry interface adapted to generate signals on the
communication link indicative of the indication from the sensor.
I 10. The apparatus...

# 46/5,K/34 (Item 34 from file: 349) DIALOG(R)File 349:PCT FULLTEXT (c) 2004 WIPO/Univentio. All rts. reserv.

00307942 \*\*Image available\*\*

PCS POCKET PHONE/MICROCELL COMMUNICATION OVER-AIR PROTOCOL
PROTOCOLE HERTZIEN DE COMMUNICATIONS PAR TELEPHONE DE POCHE OU A SYSTEME
MICRO-CELLULAIRE

MICRO-CELLULAIRE
Patent Applicant/Assignee:
 OMNIPOINT CORPORATION,
Inventor(s):
 ANDERSON Gary B,
 JENSEN Ryan N,
 PETCH Bryan K,
 PETERSON Peter O,
Patent and Priority Inform

Patent and Priority Information (Country, Number, Date):

Patent:

WO 9526094 A1 19950928

Application: WO 95US3500 19950320 (PCT/WO US9503500) Priority Application: US 94215306 19940321; US 94284053 19940801

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

CA JP KR AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE Main International Patent Class: H04M-011/00 International Patent Class: H04Q-07:20

Publication Language: English

Fulltext Availability: Detailed Description

Claims

Fulltext Word Count: 85526

### English Abstract

A simple and flexible over-air protocol for use with a mobile telephone system, having hand-held telephones (102) in a microcell or other type of cellular communication system. A method in which user stations (102) communicate with one or more base stations (104) to place and receive telephone calls, in which the user stations (102) are provided a secure voice or data link and have the ability to handoff calls between base

stations (104) while such calls are in progress. Each base station (104) has a set of "air channels" to which it transmits in sequence. The air channels supported by each base station (104) are called that base station's polling loop. A user station (102) receives general polling information on an unoccupied air channel, transmists responsive information to the base station, and awaits acknowledgement from the base station. Each base station (104) may therefore simultaneously maintain communication with as many user stations (102) as there are air channels in its polling loop. The ability of a user station (102) to communicate on any unoccupied air channel makes the protocol air-channel agile, while the stability of user station and base station clocks may define air channels, gaps, and minor frames.

### French Abstract

Un protocole hertzien simple et souple s'utilise avec un systeme de telephonie mobile disposant de telephones tenus a la main (102) relevant d'une micro-cellule ou d'un autre type de systeme de communications cellulaire. Un procede permet de communiquer depuis des stations d'utilisateur (102), avec une ou plusieurs stations de base (104) pour lancer et recevoir des appels telephoniques, et il confere a ces stations d'utilisateur (102) une liaison vocale ou de donnees sure et la possibilite de transferer des appels en cours entre des stations de base (104). Chaque station de base (104) dispose d'un jeu de canaux hertziens sur lesquels elle emet de maniere sequentielle. Ces canaux constituent la boucle d'appels selectifs d'une telle station de base. Une station (102) d'utilisateur recoit des informations generales d'appels selectifs sur un canal inoccupe, emet des informations en reponse vers la station de base et en attend l'accuse de reception. Chaque station de base (104) peut donc simultanement rester en communication avec autant de stations d'utilisateur (102) qu'il existe de canaux hertziens dans sa boucle d'appels selectifs. La possibilite de communiquer depuis une station d'utilisateur (102) sur tout canal hertzien inoccupe rend ce protocole agile en canaux hertziens alors que la stabilite des horloges des stations d'utilisation et de base permet de definir des canaux hertziens, des creneaux libres et des blocs de donnees limites.

Fulltext Availability: Detailed Description

### Detailed Description

... Quality iMeasurement (CQ1M) A digital message in two parts in which the results of mobile **channel quality** measurements are sent to a **Base** Station over the FACCH or the SACCH.

Charging Indicator Chipping - A wideband modulating signal 's amplitude that changes continually between two states, high and low, arbitrarily called +I and - 1, respectively. The sequence of...

46/5,K/35 (Item 35 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00192134 ERROR RATE MONITOR

MONITEUR DE TAUX D'ERREURS

Patent Applicant/Assignee: THE COMMONWEALTH OF AUSTRALIA, SCHOLZ Jason Beaufort, Inventor(s): SCHOLZ Jason Beaufort,

Patent and Priority Information (Country, Number, Date):

Patent:

WO 9109482 A1 19910627

Application:

WO 90AU581 19901206 (PCT/WO AU9000581)

Priority Application: AU 897774 19891207

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AT AU BB BE BF BG BJ BR CA CF CG CH CH CM DE DK ES FI FR GA GB GR HU IT JP KP KR LK LU MC MG ML MR MW NL NO RO SD SE SN SU TD TG US

Main International Patent Class: H04L-001/20

Publication Language: English

Fulltext Availability: Detailed Description

Claims

Fulltext Word Count: 13337

### English Abstract

A method of assessing a link for a digital communication system and providing a value for a channel or link state parameter, particularly bit error rate, and apparatus for the same, in which an estimate of the probability density function for the channel or link is obtained by categorising decision variables into threshold categories, and comparing the estimated probability density function with stored known probability density functions. With each stored probability density function the value of the channel parameter being monitored is stored. The value of the channel parameter being monitored is determined by selecting the value associated with the stored probability density function closest resembling the estimated probability density.

### French Abstract

Methode permettant d'evaluer une liaison pour un systeme de communication digital et de fournir une valeur pour un parametre de canal ou d'etat de liaison, en particulier le taux d'erreurs binaires, et appareil pour celui-ci, dans lequel une estimation de la fonction de densite de probabilite pour le canal ou la liaison est obtenue par categorisation des variables de decision en des categories de seuil, et comparaison de la fonction de densite de probabilite a des fonctions de densite de probabilite connues stockees. Avec chaque fonction de densite de probabilite stockee la valeur du parametre de canal controle est stockee. On determine la valeur du parametre de canal controle en selectionnant la valeur associee avec la fonction de densite de probabilite ressemblant le plus a la densite de probabilite estimee.

Main International Patent Class: H04L-001/20 Fulltext Availability: Claims

### Claim

... function

associated with the decision variables calculating means adapted to provide for at least one **channel** or **link state** parameter a parameter value **dependant** upon the measured probability density function.

46 An apparatus for use in a digital communication system including: receiving means adapted to receive a first **signal**; **signal** conditioning means **adapted** to convert the first signal into at least one output signal representative of a decision...

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(Item 36 from file: 349)
 46/5,K/36
DIALOG(R) File 349: PCT FULLTEXT
(c) 2004 WIPO/Univentio. All rts. reserv.
00173181
ADAPTIVE RATE CONTROL FOR ECHO CANCELLING MODEM
COMMANDE ADAPTATIVE DE VITESSE POUR MODEM D'ANNULATION D'ECHO
Patent Applicant/Assignee:
  CODEX CORPORATION,
Inventor(s):
  SRIDHAR Manickam R,
  PAYTON John L,
  BARGOOT Carol Ann,
Patent and Priority Information (Country, Number, Date):
  Patent:
                        WO 9006637 A1 19900614
  Application:
                        WO 89US5450 19891204 (PCT/WO US8905450)
  Priority Application: US 88370 19881202
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AT AU BE CH DE ES FR GB IT JP LU NL SE
Main International Patent Class: H04B-003/23
International Patent Class: H04B-15:00; H04L-27:04; H04L-27:20
Publication Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 13652
```

### English Abstract

Channel distortion and echo signals detrimentally affect data communication over a channel. The invention provides an echo cancellation modem for full-duplex communication which selects a modulation scheme prior to data communication, and requests changes to the level of modulation during data communication when channel quality has changed significantly. The modem includes an echo canceller (12, 14), a monitor (24) for determining the quality of the channel based on analysis of a residual echo component, and a controller (46) for selecting an acceptable modulation scheme based on the analysis by the monitor. The modem requests the remote device to operate at a selected rate, and operates at the selected rate only if the the remote device concurs. The modem uses a fall forward flag (68) to prevent contention between the modem and the remote device when the remote device cannot support a requested higher level modulation scheme. The modem includes re-initialization logic which selects appropriate monitor thresholds for coded and uncoded modulation options.

French Abstract

La distorsion des canaux et les signaux a echo affectent les communications de donnees sur un canal. L'invention concerne un modem d'annulation d'echo pour des communications en duplex integral selectionnant un plan de modulation avant la communication de donnees, et demande des modifications au niveau de la modulation pendant la communication de donnees lorsque la qualite du canal s'est modifiee de maniere significative. Ledit modem comprend une unite d'annulation d'echo (12, 14), un moniteur (24) determinant la qualite du canal basee sur l'analyse d'une composante d'echo residuel, ainsi qu'une unite de commande (46) selectionnant un plan de modulation acceptable base sur l'analyse faite par ledit moniteur. Le modem demande au dispositif eloigne de fonctionner a une vitesse selectionnee, et ne fonctionne a la vitesse selectionnee que si ledit dispositif eloigne est d'accord. Ledit

modem utilise un indicateur (68) avant de chute afin d'empecher une inadequation entre le modem et le dispositif eloigne, lorsque ce dernier ne peut s'adapter a un plan de modulation demande de niveau superieur. Le modem comprend une logique de reinitialisation selectionnant les seuils appropries du moniteur pour des options de modulation codee et non codee.

Fulltext Availability: Claims

### Claim

... quality, said modulation 7 schemes including coded and uncoded modulation modes, 8 comprising monitoring the quality of the channel based on received 10 data signals, determining when a change to a higher level modulation 12 scheme would be permissible based on when the monitored 13 channel quality exceeds a threshold, and setting the threshold to one value with respect to a 15...and a different value corresponding to a change to an uncoded modulation mode, monitoring the quality of the channel based on received data signals , determining when a change to a higher level modulation scheme would be permissible based on when the monitored channel quality exceeds the threshold, is requesting the remote device to change to a higher level modulation...

```
File 696:DIALOG Telecom. Newsletters 1995-2004/Jul 23
         (c) 2004 The Dialog Corp.
     15:ABI/Inform(R) 1971-2004/Aug 02
File
         (c) 2004 ProQuest Info&Learning
     98:General Sci Abs/Full-Text 1984-2004/Jun
File
         (c) 2004 The HW Wilson Co.
File 484: Periodical Abs Plustext 1986-2004/Jul W3
         (c) 2004 ProQuest
File 813:PR Newswire 1987-1999/Apr 30
         (c) 1999 PR Newswire Association Inc
File 613:PR Newswire 1999-2004/Aug 01
         (c) 2004 PR Newswire Association Inc
File 635:Business Dateline(R) 1985-2004/Jul 31
         (c) 2004 ProQuest Info&Learning
File 810: Business Wire 1986-1999/Feb 28
         (c) 1999 Business Wire
File 610: Business Wire 1999-2004/Aug 01
         (c) 2004 Business Wire.
File 369: New Scientist 1994-2004/Jul W3
         (c) 2004 Reed Business Information Ltd.
File 370:Science 1996-1999/Jul W3
         (c) 1999 AAAS
     20:Dialog Global Reporter 1997-2004/Aug 02
File
         (c) 2004 The Dialog Corp.
File 624:McGraw-Hill Publications 1985-2004/Jul 30
         (c) 2004 McGraw-Hill Co. Inc
File 634:San Jose Mercury Jun 1985-2004/Jul 31
         (c) 2004 San Jose Mercury News
File 647:CMP Computer Fulltext 1988-2004/Jul W4
         (c) 2004 CMP Media, LLC
File 674: Computer News Fulltext 1989-2004/Jul W1
         (c) 2004 IDG Communications
Set
        Items
                Description
S1
       779546
                SIGNAL? ?
S2
        16523
                S1(3N) (MODIFY? OR MODIFIE? ? OR MODIFICATION? OR CHANG??? ?
              OR VARY??? ? OR VARIE? ? OR ADJUST?)
                S1(3N) (READJUST? OR ADAPT??? ? OR ADAPTAB? OR ALTER OR ALT-
S3
             ERS OR ALTERED OR ALTERING OR ALTERATION?)
                S1(3N)(EDIT??? ? OR REVIS???? ? OR REDEFIN? OR REPROGRAM? -
S4
             OR RECONFIGUR? OR ALTERR?)
                S1(3N)RE()(CONFIGUR? OR PROGRAM???? ? OR PROGRAMM? OR DEFIN-
           20
S5
             E? ? OR DEFINI?)
                S1(3N) (RESYNTHESI? OR REPRODUC? OR REGENERAT? OR RECREAT? -
S6
             OR REFORM? OR RECONSTRUCT?)
                S1(3N)RE()(SYNTHESIS? OR SYNTHESIZ? OR PRODUC??????? ? OR FO-
S7
             RM????? ? OR FORMATION?)
                S1(3N)RE()(GENERAT?????? ? OR CREAT????? ? OR CONSTRUCT?)
S8
                CHANNEL? ? OR LINE OR LINES OR CIRCUIT??? ? OR PATH? ? OR -
S9
      8213039
             PATHWAY? ?
                S9(2N) (QUALITY OR STATE OR STATES OR CONDITION? ? OR STATU-
       102094
S10
             S? OR MODE OR MODES)
                STRINGEN? OR STANDARD? ? OR THRESHOLD? ? OR CONDITION? ? OR
     14564984
S11
              VALUE OR VALUES OR LEVEL? ? OR PROFILE? ? OR PATTERN? ?
                BOUND? ? OR RANGE OR RANGES OR CRITERIA? OR CRITERION? OR -
S12
      8234196
             NORM? ? OR MODEL? ? OR RULE OR RULES OR FORMULA?
      2739707
                BASELINE? OR BASE()LINE? ? OR TEMPLATE? OR YARDSTICK? OR Y-
S13
             ARD()STICK? ? OR BENCHMARK? OR BENCH()MARK??? ? OR TARGET? ?
                S11:S13(3N) (MODIFY? OR MODIFIE? ? OR MODIFICATION? OR CHAN-
S14
             G??? ? OR VARY??? ? OR VARIE? ? OR ADJUST?)
S15
                S11:S13(3N) (READJUST? OR ADAPT??? ? OR ADAPTAB? OR ALTER OR
```

```
ALTERS OR ALTERED OR ALTERING OR ALTERATION?)
              S11:S13(3N)(EDIT???? ? OR REVIS???? ? OR REDEFIN? OR REPROG-
S16
             RAM? OR RECONFIGUR? OR ALTERR?)
S17
              S11:S13(3N)RE()(CONFIGUR? OR PROGRAM???? ? OR PROGRAMM? OR -
             DEFINE? ? OR DEFINI?)
              S10(5N)(DEPEND? OR CORRELAT? OR LINK? OR INTERLINK? OR INT-
S18
             ERELAT? OR INTERRELAT?)
               S10(5N)(RELAT?? ? OR RELATING OR RELATION? OR CORELAT? OR -
S19
             CONTINGEN? OR PREDICAT? OR CIRCUMSCRIB?)
               S10(5N) (BASE OR BASED OR BASING OR SUBJECT?)
S20
        1305
               S2:S8(S)S14:S17
S21
          22
               S21(S)S10
S22
               S2:S8(S)S18:S20
S23
          24
               S22:S23
S24
S25
           7
               S24/2001:2004
               S24 NOT S25
S26
          17
S27
          13
               RD (unique items)
```

### 27/3,K/1 (Item 1 from file: 696)

DIALOG(R) File 696: DIALOG Telecom. Newsletters (c) 2004 The Dialog Corp. All rts. reserv.

00003342

### The Bare Necessities

Satellite Trader

October 1,1995 DOCUMENT TYPE: NEWSLETTER

PUBLISHER: CABLE SATELLITE AND TV NEWS

LANGUAGE: ENGLISH WORD COUNT: 575 RECORD TYPE: FULLTEXT

### TEXT:

...enough in reserve to cope with poor **signal conditions** . Channel change

### 27/3,K/2 (Item 1 from file: 15)

DIALOG(R)File 15:ABI/Inform(R)

(c) 2004 ProQuest Info&Learning. All rts. reserv.

01603774 02-54763

### New telecommunications technologies

Cohen, Robert

Business Economics v33n2 PP: 20-24 Apr 1998

ISSN: 0007-666X JRNL CODE: BEC

WORD COUNT: 3616

...TEXT: act as "filters" that can remove interference in a dynamic way or can compensate for alterations in the signal. A number of factors can alter the signal character, including various changes in the condition of the circuit. Echo problems are an important problem that HDSL is able to address. Echoes are troublesome...

### 27/3,K/3 (Item 2 from file: 15)

DIALOG(R)File 15:ABI/Inform(R)

(c) 2004 ProQuest Info&Learning. All rts. reserv.

00880310 95-29702

Cellular protocol wars escalate

Wexler, Joanie

Network World v11n26 PP: 32 Jun 27, 1994

ISSN: 0887-7661 JRNL CODE: NWW

WORD COUNT: 504

...TEXT: such as ETC and MNP-10 compensate for poor signal-to-noise ratio in cellular links by adjusting speeds to fit line conditions, reducing data packet size when many errors occur and adjusting signals when passing cellular communications to land-lines.

FURTHER PROGRESS

Meanwhile, net access vendor Primary Access...

27/3,K/4 (Item 3 from file: 15)

DIALOG(R)File 15:ABI/Inform(R)

(c) 2004 ProQuest Info&Learning. All rts. reserv.

00409431 88-26264

Critical Modem Components

Humphrey, Jack

Business Communications Review v18n3 PP: 84-86 May/Jun 1988

ISSN: 0162-3885 JRNL CODE: BCR

...ABSTRACT: the demodulator. The equalizer circuit should be tested at different signal levels over differing steady **state channel** impairments. In addition, the AGC removes the effects of **varying** received **signal levels**. Laboratory tests of echo cancelers, which rid the receiver of the transmitter's reflected signal...

27/3,K/6 (Item 1 from file: 635)

DIALOG(R)File 635:Business Dateline(R)

(c) 2004 ProQuest Info&Learning. All rts. reserv.

0569494 95-25227

PADS predicts a new era in PC board industry

Anonymous

MASS HIGH TECH (Watertown, MA, US), V13 N4 s1 p14

PUBL DATE: 950206 WORD COUNT: 973

DATELINE: Marlborough, MA, US

TEXT:

- ...pattern. This shape-based semiautomatic editor reduces manual routing time and optimizes board design.
- \* Conditional rules --automatically changes a signal 's clearance requirements relative to adjacent signals during manual and dynamic routing. This allows designers to improve electrical circuit quality and optimize board real estate.
- \* Design rules hierarchy--this allows clearance, routing, and high-speed...

27/3,K/7 (Item 2 from file: 635)

DIALOG(R)File 635:Business Dateline(R)

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### 0321107 92-69150

## Computer Products Plus Named Supplier of Acoustic Coupler for Lapheld II Contract

Husereau, Camille

Business Wire (San Francisco, CA, US) s1 p1

PUBL DATE: 920831 WORD COUNT: 457

DATELINE: Huntington Beach, CA, US

### TEXT:

...s job that much easier, " Hosilyk continued.

Product features include:

- -- 9600 bps data/facsimile rate
- -- Signal level switch to adjust to different phone and line conditions
- -- End cups adapt to fit handset, reducing noise and error
- -- Velcro strap for a secure...

?

```
9:Business & Industry(R) Jul/1994-2004/Jul 30
File
         (c) 2004 The Gale Group
     16:Gale Group PROMT(R) 1990-2004/Aug 02
File
         (c) 2004 The Gale Group
     47:Gale Group Magazine DB(TM) 1959-2004/Aug 02
File
         (c) 2004 The Gale group
File 148:Gale Group Trade & Industry DB 1976-2004/Aug 02
         (c) 2004 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
         (c) 1999 The Gale Group
File 275: Gale Group Computer DB(TM) 1983-2004/Aug 02
         (c) 2004 The Gale Group
File 570: Gale Group MARS(R) 1984-2004/Aug 02
         (c) 2004 The Gale Group
File 621: Gale Group New Prod. Annou. (R) 1985-2004/Aug 02
         (c) 2004 The Gale Group
File 636:Gale Group Newsletter DB(TM) 1987-2004/Aug 02
         (c) 2004 The Gale Group
File 649: Gale Group Newswire ASAP(TM) 2004/Jul 28
         (c) 2004 The Gale Group
                Description
Set
        Items
       978774
                SIGNAL? ?
S1
                S1(3N)(MODIFY? OR MODIFIE? ? OR MODIFICATION? OR CHANG??? ?
        20062
S2
              OR VARY??? ? OR VARIE? ? OR ADJUST?)
                S1(3N)(READJUST? OR ADAPT??? ? OR ADAPTAB? OR ALTER OR ALT-
S3
         3525
             ERS OR ALTERED OR ALTERING OR ALTERATION?)
                S1(3N)(EDIT??? ? OR REVIS???? ? OR REDEFIN? OR REPROGRAM? -
         3138
S4
             OR RECONFIGUR? OR ALTERR?)
                S1(3N)RE()(CONFIGUR? OR PROGRAM???? ? OR PROGRAMM? OR DEFIN-
S5
           35
             E? ? OR DEFINI?)
                S1(3N)(RESYNTHESI? OR REPRODUC? OR REGENERAT? OR RECREAT? -
S6
         4122
             OR REFORM? OR RECONSTRUCT?)
                S1(3N)RE()(SYNTHESIS? OR SYNTHESIZ? OR PRODUC???????? ? OR FO-
S7
             RM????? ? OR FORMATION?)
                S1(3N)RE()(GENERAT?????? ? OR CREAT??????? OR CONSTRUCT?)
S8
                CHANNEL? ? OR LINE OR LINES OR CIRCUIT??? ? OR PATH? ? OR -
S9
      9715694
             PATHWAY? ?
S10
       143375
                S9(2N) (QUALITY OR STATE OR STATES OR CONDITION? ? OR STATU-
             S? OR MODE OR MODES)
                STRINGEN? OR STANDARD? ? OR THRESHOLD? ? OR CONDITION? ? OR
$11
     13887105
              VALUE OR VALUES OR LEVEL? ? OR PROFILE? ? OR PATTERN? ?
      8369000
                BOUND? ? OR RANGE OR RANGES OR CRITERIA? OR CRITERION? OR -
S12
             NORM? ? OR MODEL? ? OR RULE OR RULES OR FORMULA?
                BASELINE? OR BASE()LINE? ? OR TEMPLATE? OR YARDSTICK? OR Y-
S13
             ARD()STICK? ? OR BENCHMARK? OR BENCH()MARK??? ? OR TARGET? ?
                S11:S13(3N) (MODIFY? OR MODIFIE? ? OR MODIFICATION? OR CHAN-
S14
             G??? ? OR VARY??? ? OR VARIE? ? OR ADJUST?)
        77802
                S11:S13(3N) (READJUST? OR ADAPT??? ? OR ADAPTAB? OR ALTER OR
S15
              ALTERS OR ALTERED OR ALTERING OR ALTERATION?)
                S11:S13(3N)(EDIT??? ? OR REVIS???? ? OR REDEFIN? OR REPROG-
S16
             RAM? OR RECONFIGUR? OR ALTERR?)
                S11:S13(3N)RE()(CONFIGUR? OR PROGRAM???? ? OR PROGRAMM? OR -
S17
             DEFINE? ? OR DEFINI?)
                S10 (5N) (DEPEND? OR CORRELAT? OR LINK? OR INTERLINK? OR INT-
         1977
S18
             ERELAT? OR INTERRELAT?)
                S10(3N)(CO OR INTER)()(RELAT?? ? OR RELATING OR RELATION?)
S19
                S10(3N)(RELAT?? ? OR RELATING OR RELATION? OR CORELAT? OR -
S20
             CONTINGEN? OR PREDICAT? OR CIRCUMSCRIB?)
                S10(3N)(BASE OR BASED OR BASING OR SUBJECT?)
S21
         1518
                S2:S8(S)S14:S17
S22
         2127
```

 \$23
 5
 \$2:\$8(\$)\$18:\$21

 \$24
 42
 \$22(\$)\$10

 \$25
 42
 \$23:\$24

 \$26
 \$23:\$24

\$26 8 \$25/2001:2004

\$27 34 \$25 NOT \$26
\$28 23 RD (unique items)

28/3,K/10 (Item 5 from file: 148)

DIALOG(R) File 148: Gale Group Trade & Industry DB (c) 2004 The Gale Group. All rts. reserv.

06806879 SUPPLIER NUMBER: 15119634 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Feature-rich chip set powers data-fax modem. (Silicon Systems Inc.'s
73D2950T chip set) (Product Announcement)

Leonard, Milt

Electronic Design, v41, n25, p55(3)

Dec 2, 1993

DOCUMENT TYPE: Product Announcement ISSN: 0013-4872 LANGUAGE:

ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 1492 LINE COUNT: 00118

... demodulator, which also recovers the data clock from the incoming signal. Adaptive equalization compensates for varying line conditions by automatically changing filter parameters.

DSP MODULATION

In the differential phase-shift-keying (DPSK) mode, the DSP chip...

28/3,K/15 (Item 1 from file: 160)
DIALOG(R) File 160:Gale Group PROMT(R)

(c) 1999 The Gale Group. All rts. reserv.

01865005

Mitel, BTD modem unveiled

Network World February 8, 1988 p. 13,17

... 9.6, and 14.4 Kbps transmission, in accordance with the speeds of incoming modem signals. Also, to accommodate changing line conditions, the new modem offers automatic fall-forward and fallback capabilities. The DM 4142TCX consists of...

### 28/3,K/16 (Item 2 from file: 160)

DIALOG(R) File 160: Gale Group PROMT(R)

(c) 1999 The Gale Group. All rts. reserv.

01337438

Prentice Unveils 2,400-BPS Modem.

INFOWORLD April 21, 1986 p. 62

...dial, auto-answer modem works with Touch Tone and pulse dial phones, and it automatically adjusts its signals in response to varying phone line conditions. The modem meets CCITT V.22 bis communications specifications, as well as Bell 212A and...

### 28/3,K/18 (Item 4 from file: 160)

DIALOG(R)File 160:Gale Group PROMT(R)

(c) 1999 The Gale Group. All rts. reserv.

00513895

plessey's (UK) 16,000 bps modem for use over voice-grade 4-wire leased telephone lines is claimed to be the fastest on the market. Computer Weekly October 18, 1979 p. 15

...into 2 sets of 1-of-8 amplitude levels on two 2,700-Hz carrier signals . Automatic adaptive equalization equipment using bit-sliced microprocessors counters noise and varying line conditions .

28/3,K/21 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

01719590 SUPPLIER NUMBER: 16298395 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Hit the road. (mobile computing with Microsoft Windows) (Mobile Computing)
(Cover Story)

Seltzer, Larry; Smith, Gregory; Venditto, Gus; Frezza, Bill; Butner, Richard

Windows Sources, v3, n1, p54(2)

Jan, 1995

DOCUMENT TYPE: Cover Story ISSN: 1065-9641 LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 658 LINE COUNT: 00050

...ABSTRACT: cellular modems incorporate such error-correction protocols as MNP 10 to compensate for the adverse **line conditions** found on cellular networks; most also have circuitry that let them operate as land-line modems. The new V.34 standard is not only faster than previous **standards** but intelligently **adjusts** parameters according to **signal** quality with its new 'line probing' protocol. Windows 95 will be very important to mobile...

... example, it also uses a new protocol, line probing. As soon as a modem detects conditions on the line changing (if the signal weakens, for instance), it invokes line probing, which reacts to the new line conditions by immediately adjusting such parameters as compression and error correction.

PCMCIA cellular modems use protocols such as Microcom...

### 28/3,K/22 (Item 2 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM) (c) 2004 The Gale Group. All rts. reserv.

01293865 SUPPLIER NUMBER: 07179622 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Modems, muxes remain staples of industry. (Technology Overview)
(communications industry) (includes related article about MNP layered protocol)

Axner, David H.

TPT, v7, n2, p52(6)

Feb, 1989

ISSN: 1043-9099 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT WORD COUNT: 2459 LINE COUNT: 00202

... does not interfere with the received signal from the far-end modem. Echo cancellation actually adapts to changing line conditions by using the difference signal to alter the echo nullifying process. This is referred to as adaptive cancellation.

The V.32 international...

28/3,K/23 (Item 3 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

01126554 SUPPLIER NUMBER: 00641156

Speedy Dial-Up Modem Adjusts to Line Conditions.

Data Communications, v14, n10, p298

Sept., 1985

DOCUMENT TYPE: product announcement ISSN: 0363-6399 LANGUAGE:

ENGLISH RECORD TYPE: ABSTRACT

...ABSTRACT: up modem that operates at high speeds and uses new technology enabling the modem to adjust to line conditions and receiving equipment. The modem produces tones to match telephone frequency bandwidth, and for each tone, checks and adjusts for distortion, signal impairments, noises, and amplitude variation. The modem is available in a plug-in board for...

File 347: JAPIO Nov 1976-2004/Mar(Updated 040708) (c) 2004 JPO & JAPIO

File 350:Derwent WPIX 1963-2004/UD,UM &UP=200448

(c) 2004 Thomson Derwent

File 348:EUROPEAN PATENTS 1978-2004/Jul W03

(c) 2004 European Patent Office

File 349:PCT FULLTEXT 1979-2002/UB=20040729,UT=20040722

(c) 2004 WIPO/Univentio

Set	Items	Description
S1	91	AU='VAINIO J':AU='VAINIO JANNE'
S2	54	AU='MIKKOLA H':AU='MIKKOLA HANNU J'
s3	44	AU='ROTOLA P J':AU='ROTOLA-PUKKILA JANI'
S4	25	TYPICALITY
S5	2	S1:S3 AND S4
S6	232	ITERATIV?(3N)SYNTHESI?
S7	3	S1:S3 AND S6
S8	3	S5 OR S7
2		

coding

```
(Item 1 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
014447796
             **Image available**
WPI Acc No: 2002-268499/200231
XRPX Acc No: NO2-208956
 Audible error detector and controller utilizing channel quality data and
             synthesis, errors occurring in synthesized speech are
 detected by searching for typical sound with stringency dependent upon
  channel quality
Patent Assignee: NOKIA CORP (OYNO ); NOKIA INC (OYNO ); MIKKOLA H J
  (MIKK-I); ROTOLA-PUKKILA J (ROTO-I); VAINIO J (VAIN-I); NOKIA MOBILE
  PHONES LTD (OYNO )
Inventor: MIKKOLA H J ; ROTOLA-PUKKILA J ; VAINIO J
Number of Countries: 095 Number of Patents: 005
Patent Family:
                                                   Date
Patent No
                             Applicat No
                                            Kind
                                                            Week
              Kind
                    Date
                                                 20010604
                                                           200231
                  20011213
                            WO 2001IB965
WO 200195313
              A1
                                             Α
                   20011217 AU 200162571
                                                 20010604
                                                           200231
                                             Α
AU 200162571
              Α
US 20020002456 A1 20020103 US 2000209860
                                             Ρ
                                                  20000607
                                                            200231
                                                 20010509
                             US 2001852127
                                             Α
                  20030319
                             EP 2001936704
                                                 20010604
                                                           200322
EP 1292943
                                             Α
              Α1
                             WO 2001IB965
                                                 20010604
                                             Α
CN 1433562
                   20030730 CN 2001810686
                                             A
                                                 20010604
                                                           200365
              Α
Priority Applications (No Type Date): US 2000209860 P 20000607; US
  2001852127 A 20010509
Patent Details:
Patent No Kind Lan Pg
                         Main IPC
                                     Filing Notes
WO 200195313 A1 E 23 G10L-019/00
   Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
  CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP
  KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT
   RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
   Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
   IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
                       G10L-019/00
                                     Based on patent WO 200195313
AU 200162571 A
                        G10L-013/00
US 20020002456 A1
                                      Provisional application US 2000209860
EP 1292943
             A1 E
                       G10L-019/00
                                     Based on patent WO 200195313
   Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
   LI LT LU LV MC MK NL PT RO SE SI TR
CN 1433562
                       G10L-019/00
Abstract (Basic): WO 200195313 A1
       NOVELTY - Errors occurring in synthesized speech are detected by
    searching for atypical sound with a stringency dependent upon channel
    quality. The greater the channel quality deficiency is, the higher the
    typically standards will be. Errors are controlled by either
    re-synthesizing the signal in an iterative way using typically
    standards which vary with channel quality deficiency, or by modifying
    the output signal using typicality standards which vary with channel
    quality deficiency, or both.
        DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a
        USE - For audible communication. For speech coding and channel
```

ADVANTAGE - Improves detection and concealment of audio errors

```
occurring as result of imperfect transmission channel quality
        DESCRIPTION OF DRAWING(S) - The figure shows a diagrammatic
    representation of the iterative processor.
        pp; 23 DwgNo 3/3
Title Terms: AUDIBLE; ERROR; DETECT; CONTROL; UTILISE; CHANNEL; QUALITY;
  DATA; ITERATIVE; SYNTHESIS; ERROR; OCCUR; SYNTHESIS; SPEECH; DETECT;
  SEARCH; TYPICAL; SOUND; DEPEND; CHANNEL; QUALITY
Derwent Class: P86; U21; W01; W04
International Patent Class (Main): G10L-013/00; G10L-019/00
International Patent Class (Additional): H03M-013/45; H04L-001/00;
  H04L-001/20
File Segment: EPI; EngPI
Manual Codes (EPI/S-X): U21-A06; W01-A01; W01-A01C; W04-V05G
           (Item 1 from file: 348)
DIALOG(R) File 348: EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.
01392122
AUDIBLE ERROR DETECTOR AND CONTROLLER UTILIZING CHANNEL QUALITY DATA AND
     ITERATIVE
                 SYNTHESIS
                                          STEUERUNG UNTER VERWENDUNG DER
DETEKTOR
          FUR
                 HORBARE
                           FEHLER
                                    UND
    KANALQUALITAT UND DER ITERATIVEN SYNTHESE
DETECTEUR ET SUPPRESSEUR D'ERREURS AUDIBLES UTILISANT DES DONNEES DE
    QUALITE DU CANAL ET LA SYNTHESE ITERATIVE
PATENT ASSIGNEE:
  Nokia Corporation, (3988870), Keilalahdentie 4, 02150 Espoo, (FI),
    (Applicant designated States: all)
INVENTOR:
   VAINIO, Janne , Simunantie 8-12 B 6, FIN-33880 Lempaala, (FI)
  MIKKOLA, Hannu, J., Ippisenkatu 15, FIN-33300 Tampere, (FI)
   ROTOLA-PUKKILA, Jani , Lehvankatu 24 E 44, FIN-33820 Tampere, (FI
LEGAL REPRESENTATIVE:
  Style, Kelda Camilla Karen et al (75491), Page White & Farrer, 54 Doughty
    Street, London WC1N 2LS, (GB)
PATENT (CC, No, Kind, Date):
                             EP 1292943 A1 030319 (Basic)
                              WO 2001095313 011213
                              EP 2001936704 010604; WO 2001IB965 010604
APPLICATION (CC, No, Date):
PRIORITY (CC, No, Date): US 209860 P 000607
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
  LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: G10L-019/00; H04L-001/00; H04L-001/20;
  H03M-013/45
CITED PATENTS (WO A): XP 2179452
CITED REFERENCES (WO A):
  US 6230125 B1
  DE 19932943 A
   "3G TS 26.091 V3.1.0" December 1999 (1999-12) , 3GPP ORGANISATIONAL
    PARTNERS' PUBLICATIONS OFFICES XP002179452 *section 4, general*
    *section 5.1, Error detection* page 6;
NOTE:
  No A-document published by EPO
LEGAL STATUS (Type, Pub Date, Kind, Text):
                  020213 Al International application. (Art. 158(1))
 Application:
                  020213 Al International application entering European
 Application:
                            phase
                  030319 Al Published application with search report
 Application:
                  030319 Al Date of request for examination: 20030106
 Examination:
                  030604 Al Inventor information changed: 20030412
 Change:
```

```
(Item 1 from file: 349)
DIALOG(R) File 349: PCT FULLTEXT
(c) 2004 WIPO/Univentio. All rts. reserv.
            **Image available**
00861649
AUDIBLE ERROR DETECTOR AND CONTROLLER UTILIZING CHANNEL QUALITY DATA AND
                 SYNTHESIS
     ITERATIVE
DETECTEUR ET SUPPRESSEUR D'ERREURS AUDIBLES UTILISANT DES DONNEES DE
    QUALITE DU CANAL ET LA SYNTHESE ITERATIVE
Patent Applicant/Assignee:
  NOKIA MOBILE PHONES LTD, Keilalahdentie 4, FIN-02150 Espoo, FI, FI
    (Residence), FI (Nationality)
  NOKIA INC, 6000 Connection Drive, Irving, TX 75039, US, US (Residence),
    US (Nationality), (Designated only for: LC)
Inventor(s):
   VAINIO Janne , Laurintie 16 C, FIN-33880 Lempaala, FI,
  MIKKOLA Hannu J , Ippisenkatu 15, FIN-33300 Tampere, FI,
   ROTOLA-PUKKILA Jani , Lehvankatu 24 E 44, FIN-33820 Tampere, FI
Legal Representative:
 MAGUIRE Francis J (agent), Ware, Fressola, Van Der Sluys & Adolphson LLP, 755 Main Street, P.O. Box 224, Monroe, CT 06468, US,
Patent and Priority Information (Country, Number, Date):
                         WO 200195313 A1 20011213 (WO 0195313)
  Patent:
                         WO 2001IB965 20010604 (PCT/WO IB0100965)
  Application:
  Priority Application: US 2000209860 20000607
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE
  ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT
  LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM
  TR TT TZ UA UG UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: G10L-019/00
International Patent Class: H04L-001/00; H04L-001/20; H03M-013/45
Publication Language: English
Filing Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 4659
English Abstract
  An apparatus and method for detecting and controlling audible errors in a
```

sound communication system at the receiver utilizes channel quality data synthesis . Errors occurring in synthesized speech and also iterative are detected by searching for atypical sound with a stringency dependent upon channel quality. The greater the channel quality deficiency is, the higher the typically standards will be. Errors are controlled by either re-synthesizing the signal in an interative way using typically standards which vary with channel quality deficiency, or by modifying the output signal using typicality standards which vary with channel quality deficiency, or both.

### French Abstract

Cette invention se rapporte a un appareil et a un procede servant a detecter et a supprimer les erreurs audibles dans un systeme de communication sonore au niveau du recepteur et qui utilisent a cet effet des donnees de qualite du canal ainsi que la synthese iterative. Les erreurs se produisant dans une parole synthetisee sont detectees par recherche des sons atypiques avec une rigueur qui depend de la qualite du canal. Plus la deficience de la qualite du canal est grande, plus les normes de typicite sont elevees. Les erreurs sont supprimees par resynthese du signal en mode iteratif a l'aide de normes de typicite qui varient avec la deficience de la qualite du canal et/ou par modification du signal de sortie a l'aide de normes de typicite qui varient avec la deficience de la qualite du canal.

Legal Status (Type, Date, Text)
Publication 20011213 A1 With international search report.
Publication 20011213 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

File 256:TecInfoSource 82-2004/Jul (c) 2004 Info. Sources Inc

Set	Items	Description					
S1	959 SIGNAL? ?						
S2	12 O	S1(3N)(MODIFY? OR MODIFIE? ? OR MODIFICATION? OR CHANG??? ? R VARY??? ? OR VARIE? ? OR ADJUST?)					
S3	4 ER:	S1(3N)(READJUST? OR ADAPT??? ? OR ADAPTAB? OR ALTER OR ALT- S OR ALTERED OR ALTERING OR ALTERATION?)					
S4	2	S1(3N)(EDIT??? ? OR REVIS???? ? OR REDEFIN? OR REPROGRAM? -					
<b>S</b> 5	0	RECONFIGUR? OR ALTERR?) S1(3N)RE()(CONFIGUR? OR PROGRAM????? OR PROGRAMM? OR DEFIN-					
	E?	? OR DEFINI?)					
S6	3	S1(3N) (RESYNTHESI? OR REPRODUC? OR REGENERAT? OR RECREAT? -					
	OR	REFORM? OR RECONSTRUCT?)					
S7	0	S1(3N)RE()(SYNTHESIS? OR SYNTHESIZ? OR PRODUC??????? ? OR FO-					
	RM	???? ? OR FORMATION?)					
S8	0	S1(3N)RE()(GENERAT?????? ? OR CREAT??????? OR CONSTRUCT?)					
S9	8013	CHANNEL? ? OR LINE OR LINES OR CIRCUIT??? ? OR PATH? ? OR -					
	PA'	THWAY? ?					
S10	69	S9(2N) (QUALITY OR STATE OR STATES OR CONDITION? ? OR STATU-					
	S?	OR MODE OR MODES)					
S11	18661	STRINGEN? OR STANDARD? ? OR THRESHOLD? ? OR CONDITION? ? OR					
	V	ALUE OR VALUES OR LEVEL? ? OR PROFILE? ? OR PATTERN? ?					
S12	12121	BOUND? ? OR RANGE OR RANGES OR CRITERIA? OR CRITERION? OR -					
	NO:	RM? ? OR MODEL? ? OR RULE OR RULES OR FORMULA?					
S13	3910	BASELINE? OR BASE()LINE? ? OR TEMPLATE? OR YARDSTICK? OR Y-					
		D()STICK? ? OR BENCHMARK? OR BENCH()MARK??? ? OR TARGET? ?					
S14	595	S11:S13(3N) (MODIFY? OR MODIFIE? ? OR MODIFICATION? OR CHAN-					
		?? ? OR VARY??? ? OR VARIE? ? OR ADJUST?)					
S15	124	S11:S13(3N) (READJUST? OR ADAPT???? ? OR ADAPTAB? OR ALTER OR					
		LTERS OR ALTERED OR ALTERING OR ALTERATION?)					
S16	574						
	_	M? OR RECONFIGUR? OR ALTERR?)					
S17	0	S11:S13(3N)RE() (CONFIGUR? OR PROGRAM???? ? OR PROGRAMM? OR -					
		FINE? ? OR DEFINI?)					
S18	2	S10(5N)(DEPEND? OR CORRELAT? OR LINK? OR INTERLINK? OR INT-					
010	_	ELAT? OR INTERRELAT?)					
S19	0	S10(5N)(RELAT?? ? OR RELATING OR RELATION? OR CORELAT? OR -					
200		NTINGEN? OR PREDICAT? OR CIRCUMSCRIB?)					
S20	4	S10(5N)(BASE OR BASED OR BASING OR SUBJECT?)					
S21	1	S2:S8 AND S14:S17					
S22	0	S2:S8 AND S18:S20					
? t21/7							
21/7/1							

### 21/7/1

DIALOG(R) File 256: TecInfoSource (c)2004 Info.Sources Inc. All rts. reserv.

DOCUMENT TYPE: Review 00135581

PRODUCT NAMES: Company--Cellonics Inc Pte Ltd (876518)

TITLE: Brain Waves: Emulating the way signals travel around the brain

may...

AUTHOR: Haldar, Joyita SOURCE: tele.com, v6 n20 p28(2) Oct 15, 2001

ISSN: 1086-7821

HOMEPAGE: http://www.teledotcom.com

RECORD TYPE: Review

REVIEW TYPE: Product Analysis GRADE: Product Analysis, No Rating

After three years of research on a new networking system, scientists Lye Kin Mun and Jurianto Joe have cofounded Cellonics. Referencing mathematics associated with biological neuron signaling and nonlinear dynamical systems (NDSes), Cellonics approach centers on enhanced network demodulator processing. Demodulators retrieve electrical signals from carrier signals standard transmission and reception . Cellonics' approach alters technologies, speeding processing times. Modulator circuits transform each data bit into an analog radio frequency (RF) wave shape, termed a 'slow' wave.' With demodulation, RF waves are converted back to a pulse composed of multiple spikes. This is termed a 'fast wave.' Wave spikes are associated with digital numbers, extending beyond standard binary constraints. Paul Ho, electrical engineering professor at the National University of Singapore, believes that the error rates of Cellonics' system match those of linear receivers. However, the firm will have to develop new receivers for the system. Cellonics currently is looking for a manufacturing partner.

REVISION DATE: 20030330

```
File 350:Derwent WPIX 1963-2004/UD, UM &UP=200448F
         (c) 2004 Thomson Derwent
Set
        Items
                Description
S1
      2295052
                SIGNAL? ?
                S1(3N) (MODIFY? OR MODIFIE? ? OR MODIFICATION? OR CHANG??? ?
S2
       107769
              OR VARY??? ? OR VARIE? ? OR ADJUST?)
                S1(3N)(READJUST? OR ADAPT???? ? OR ADAPTAB? OR ALTER OR ALT-
S3
        11975
             ERS OR ALTERED OR ALTERING OR ALTERATION?)
                S1(3N)(EDIT??? ? OR REVIS???? ? OR REDEFIN? OR REPROGRAM? -
S4
         2648
             OR RECONFIGUR? OR ALTERR?)
                S1(3N)RE()(CONFIGUR? OR PROGRAM???? ? OR PROGRAMM? OR DEFIN-
S5
           35
             E? ? OR DEFINI?)
                S1(3N)(RESYNTHESI? OR REPRODUC? OR REGENERAT? OR RECREAT? -
        70494
S6
             OR REFORM? OR RECONSTRUCT?)
           48
                S1(3N)RE()(SYNTHESIS? OR SYNTHESIZ? OR PRODUC?????? ? OR FO-
S7
             RM???? ? OR FORMATION?)
                S1(3N)RE()(GENERAT?????? ? OR CREAT????? ? OR CONSTRUCT?)
$8
           60
                CHANNEL? ? OR LINE OR LINES OR CIRCUIT??? ? OR PATH? ? OR -
S9
      4234348
             PATHWAY? ?
                S9(2N) (QUALITY OR STATE OR STATES OR CONDITION? ? OR STATU-
S10
        68036
             S? OR MODE OR MODES)
      3877080
                STRINGEN? OR STANDARD? ? OR THRESHOLD? ? OR CONDITION? ? OR
S11
              VALUE OR VALUES OR LEVEL? ? OR PROFILE? ? OR PATTERN? ?
                BOUND? ? OR RANGE OR RANGES OR CRITERIA? OR CRITERION? OR -
S12
      1861347
             NORM? ? OR MODEL? ? OR RULE OR RULES OR FORMULA?
                BASELINE? OR BASE()LINE? ? OR TEMPLATE? OR YARDSTICK? OR Y-
S13
       256874
             ARD()STICK? ? OR BENCHMARK? OR BENCH()MARK??? ? OR TARGET? ?
                S11:S13(3N) (MODIFY? OR MODIFIE? ? OR MODIFICATION? OR CHAN-
S14
       244566
             G??? ? OR VARY??? ? OR VARIE? ? OR ADJUST?)
                S11:S13(3N) (READJUST? OR ADAPT???? ? OR ADAPTAB? OR ALTER OR
S15
        23656
              ALTERS OR ALTERED OR ALTERING OR ALTERATION?)
                S11:S13(3N) (EDIT??? ? OR REVIS???? ? OR REDEFIN? OR REPROG-
S16
         4811
             RAM? OR RECONFIGUR? OR ALTERR?)
                S11:S13(3N)RE()(CONFIGUR? OR PROGRAM????? OR PROGRAMM? OR -
S17
             DEFINE? ? OR DEFINI?)
                S10(5N) (DEPEND? OR CORRELAT? OR LINK? OR INTERLINK? OR INT-
S18
             ERELAT? OR INTERRELAT?)
                S10(5N)(RELAT?? ? OR RELATING OR RELATION? OR CORELAT? OR -
S19
          271
             CONTINGEN? OR PREDICAT? OR CIRCUMSCRIB?)
                S10(5N) (BASE OR BASED OR BASING OR SUBJECT?)
S20
         2571
S21
        23603
                S2:S8 AND S14:S17
          459
                S21 AND S10
S22
          160
                S2:S8 AND S14:S17(15N)S10
S23
                S2:S8 AND S18:S20
S24
          140
S25
         7545
                IC='G10L-019'
S26
         5747
                IC='G10L-013'
S27
        32210
                IC='H04L-001'
        15381
                IC='H03M-013'
S28
        11683
                MC='U21-A06'
S29
S30
         7135
                MC='W01-A01'
S31
         4811
                MC='W01-A01C'
                MC='W04-V05G'
S32
         3532
S33
           18
                S22 AND S25:S32
                S24 AND S25:S32
S34
           11
S35
           19
                S23 AND S24
S36
        11720
                S2:S8(5N)(SPEECH? OR SPOK? OR SPEAK? OR SOUND OR AUDIO OR -
```

ACOUSTIC? OR PHONIC? OR AURAL OR SONIC?)

File 347: JAPIO Nov 1976-2004/Mar(Updated 040708)

(c) 2004 JPO & JAPIO

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S2:S8(5N) (ITERATIV? OR PERIODIC? OR RECURR? OR FREQUENT? OR
S37
         1660
              OCCASIONAL? OR CONTINUAL? OR REPEAT?)
                S2:S8(5N) (REPETITIOUS? OR SYSTEMATIC? OR CONTINUOUS?)
S38
         1401
S39
                S22 AND S36:S38
           17
S40
            8
                $24 AND $36:$38
S41
           60
                $33:$35 OR $39:$40
                IDPAT (sorted in duplicate/non-duplicate order)
S42
           60
                IDPAT (primary/non-duplicate records only)
S43
            (Item 2 from file: 350)
 43/9/2
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
             **Image available**
016114137
WPI Acc No: 2004-272013/200426
XRPX Acc No: N04-215269
  Point-to-point wireless telecommunication system, has transmitter with
  variable modulator, and receiver with variable demodulator for changing
  modulation level in response to possible degrades and disturbs in radio
  channel
Patent Assignee: ALCATEL (COGE
Inventor: ANGELONI T F; COLOMBO C; FRECASSETTI M G; PELLIZZONI R; VALTOLINA
Number of Countries: 030 Number of Patents: 001
Patent Family:
                             Applicat No
                                            Kind
                                                   Date
                                                            Week
Patent No
              Kind
                     Date
                                                           200426 B
EP 1406405
              A1 20040407 EP 2002292447
                                             Α
                                                 20021004
Priority Applications (No Type Date): EP 2002292447 A 20021004
Patent Details:
Patent No Kind Lan Pg
                         Main IPC
                                     Filing Notes
              A1 E 10 H04L-001/00
EP 1406405
   Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
   GR IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR
Abstract (Basic): EP 1406405 Al
        NOVELTY - The system has a transmitter (10) with a variable
    modulator (24), and a receiver with a variable demodulator for
    changing a modulation costellation/ level in response to possible
    degrades and/or disturbs in a radio channel and/or changes of
    transmission capacity requirements. The modulator and demodulator
    operate according to a quadrature amplitude modulation (QAM) scheme.
        DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a
    method for point-to-point radio transmitting signal through an
    adaptive point-to-point wireless telecommunication system.
        USE - Used for a point-to-point wireless telecommunication system.
        ADVANTAGE - The system is dynamically changing the modulation
    level according to both capacity requirements and radio channel
    conditions .
        DESCRIPTION OF DRAWING(S) - The drawing shows a schematic view of a
    transmitter side of a system.
        Transmitter (10)
        Signals (121-12n)
        Input interfaces (141-14n)
        Queue blocks (161-16n)
        Mapper (22)
        Variable modulator (24)
        pp; 10 DwgNo 1/4
Title Terms: POINT; POINT; WIRELESS; TELECOMMUNICATION; SYSTEM; TRANSMIT;
  VARIABLE; MODULATE; RECEIVE; VARIABLE; DEMODULATE; CHANGE; MODULATE;
```

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LEVEL; RESPOND; POSSIBILITY; DEGRADE; DISTURB; RADIO; CHANNEL
Derwent Class: U23; W01; W02
International Patent Class (Main): H04L-001/00
International Patent Class (Additional): H04L-027/34
File Segment: EPI
Manual Codes (EPI/S-X): U23-P01; W01-A01; W01-A09C; W02-C03D1; W02-G01D;
  W02-G03E
            (Item 4 from file: 350)
 43/9/4
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
             **Image available**
015738820
WPI Acc No: 2003-801021/200375
XRPX Acc No: N03-641915
  Amplifier module for optical telecommunication network, has signal
 processor which adjusts operating conditions of fiber amplifier, such
  that fiber amplifier gain does not exceed deviation limit of set point
  gain
Patent Assignee: KOKUSAI DENKI KK (KOKZ ); HITACHI KOKUSAI DENKI KK (KOKZ
  ); FLINTHAM B (FLIN-I); GRIGGS R D (GRIG-I); NORTEL NETWORKS LTD (NELE )
Inventor: FLINTHAM B; GRIGGS R D
Number of Countries: 003 Number of Patents: 004
Patent Family:
Patent No
              Kind
                     Date
                             Applicat No
                                            Kind
                                                   Date
                                                            Week
                                                           200375
                    20021226 US 2002109216
                                                  20020328
US 20020196531 A1
                                            Α
                             JP 2001187468
JP 2003007697 A
                   20030110
                                            Α
                                                 20010621
                                                           200375
KR 2002096860 A
                   20021231
                             KR 200215531
                                            Α
                                                 20020322
                                                           200375
                  20040203 US 2002109216
                                                 20020328
US 6687050
              B2
                                            Α
                                                          200413
Priority Applications (No Type Date): JP 2001187468 A 20010621
Patent Details:
Patent No Kind Lan Pg
                        Main IPC
                                     Filing Notes
US 20020196531 A1
                     8 H01S-003/00
                     8 H01L-021/316
JP 2003007697 A
                      H01L-021/205
KR 2002096860 A
                      H01S-003/00
US 6687050
           B2
Abstract (Basic): US 20020196531 A1
        NOVELTY - A fiber amplifier (102) having a set point gain,
    amplifies a multiplexed optical stream. A signal processor (108)
    adjusts the operating conditions of the fiber amplifier, based on
    the channel loading condition, such that the fiber amplifier gain
    does not exceed deviation limit of the set point gain.
        DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
    following:
        (1) optical fiber link;
        (2) node in optical fiber link; and
        (3) method of operating amplifier module.
        USE - For optical fiber link (claimed) in optical telecommunication
    network.
        ADVANTAGE - Since the gain is controlled within the deviation
    limit, signal to noise ratio of the channels is improved. Bit error
```

increased, without using additional components.
 DESCRIPTION OF DRAWING(S) - The figure shows the circuit diagram of
the amplifier system.

rate of the channel is reduced, thereby improving the performance of the amplifier module. Hence carrying capacity of the optical link is

amplifier module (101)

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fiber amplifier (102)
        signal processor (108)
        input fiber (114)
       power controller (118)
       detection circuit (130)
       link (202)
       pp; 8 DwqNo 2/3
Title Terms: AMPLIFY; MODULE; OPTICAL; TELECOMMUNICATION; NETWORK; SIGNAL;
  PROCESSOR; ADJUST; OPERATE; CONDITION; AMPLIFY; AMPLIFY; GAIN; DEVIATE;
 LIMIT; SET; POINT; GAIN
Derwent Class: V07; W02
International Patent Class (Main): H01L-021/205; H01L-021/316; H01S-003/00
International Patent Class (Additional): C23C-016/40; C23C-016/56;
  H01L-021/31; H04B-010/12
File Segment: EPI
Manual Codes (EPI/S-X): V07-K01C2; W02-C04B1
            (Item 6 from file: 350)
43/9/6
DIALOG(R) File 350: Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.
             **Image available**
015583108
WPI Acc No: 2003-645265/200361
XRPX Acc No: N03-513347
 Forward-link signal power adjustment method in mobile communication
  system, involves comparing parameter estimated using received channel
           based on pilot signal with target value for adjusting
  quality
  transmission power of signal
Patent Assignee: LG ELECTRONICS INC (GLDS )
Inventor: KIM G J; LEE Y J; YOO C U; KIM K; YOU C W
Number of Countries: 002 Number of Patents: 002
Patent Family:
Patent No
                            Applicat No
                                           Kind
                                                   Date
             Kind
                     Date
US 20030109221 A1 20030612 US 2002310795
                                                  20021206 200361 B
                                            Α
KR 2003046977 A 20030618 KR 200177323
                                            Α
                                                 20011207
Priority Applications (No Type Date): KR 200177323 A 20011207
Patent Details:
                        Main IPC
                                     Filing Notes
Patent No Kind Lan Pg
US 20030109221 A1
                    13 H04B-007/185
KR 2003046977 A
                       H04B-007/26
Abstract (Basic): US 20030109221 A1
        NOVELTY - A power control parameter is estimated using received
             quality value based on power control group of pilot signal
    and comparing the parameter with a target value. The transmission power
    of the corresponding power control group of the forward-link signal
    is adjusted according to the comparison result.
        USE - For adjusting physical channel power in mobile communication
    system.
        ADVANTAGE - Enables an efficient power control, thus the power
    consumption of the transmitting end in greatly reduced to effect the
    cost reduction.
        DESCRIPTION OF DRAWING(S) - The figures show the block diagrams of
    the forward-link signal power adjustment in mobile communication
    system.
        pp; 13 DwgNo 1A, 1B/5
```

Title Terms: FORWARD; LINK; SIGNAL; POWER; ADJUST; METHOD; MOBILE;

COMMUNICATE; SYSTEM; COMPARE; PARAMETER; ESTIMATE; RECEIVE; CHANNEL; QUALITY; BASED; PILOT; SIGNAL; TARGET; VALUE; ADJUST; TRANSMISSION; POWER

### ; SIGNAL

Derwent Class: W01; W02

International Patent Class (Main): H04B-007/185; H04B-007/26
International Patent Class (Additional): H04B-007/00; H04Q-007/20

File Segment: EPI

Manual Codes (EPI/S-X): W01-B05A1A; W02-C03B1A; W02-C03C1A; W02-C03E3

### 43/9/7 (Item 7 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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015395554 \*\*Image available\*\*
WPI Acc No: 2003-457695/200343

XRPX Acc No: N03-363932

Decoding delta modulated signal by changing bit pattern to retain or decrease decoding step size

Patent Assignee: TELEFONAKTIEBOLAGET ERICSSON L M (TELF )

Inventor: ZURBES S; ZUERBES S

Number of Countries: 098 Number of Patents: 002

Patent Family:

Patent No Applicat No Kind Date Kind Date 200343 B A1 20030605 WO 2001EP13977 A 20011129 WO 200346888 AU 2002219148 A1 20030610 WO 2001EP13977 Α 20011129 AU 2002219148 Α 20011129

Priority Applications (No Type Date): WO 2001EP13977 A 20011129 Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200346888 A1 E 28 G10L-019/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW AU 2002219148 A1 G10L-019/00 Based on patent WO 200346888

Abstract (Basic): WO 200346888 A1

NOVELTY - Method consists in receiving the delta modulated signal over an erroneous **channel**, determining a **quality** estimate indicative of the instantaneous bit error rate and a threshold decision, assessing the estimate and preventing or reducing an increase of the step size by **changing** a first bit **pattern** into a second and generating a dedicated control signal for a decoder.

DETAILED DESCRIPTION - There are INDEPENDENT CLAIMS for:

- (1) A computer program for delta modulation decoding
- (2) A delta modulated signals decoder stage receiver
- (3) A communications system

USE - Method is for decoding delta modulated **signals** using an adaptively **varied** decoding step size.

ADVANTAGE - Method is less vulnerable to interference signals like short error bursts.

DESCRIPTION OF DRAWING(S) - The figure shows a receiver stage for decoding a delta modulated signal.

pp; 28 DwgNo 4/5

Title Terms: DECODE; DELTA; MODULATE; SIGNAL; CHANGE; BIT; PATTERN; RETAIN; DECREASE; DECODE; STEP; SIZE

Derwent Class: P86; W01; W02; W04

International Patent Class (Main): G10L-019/00

International Patent Class (Additional): H04B-014/06; H04B-014/066

File Segment: EPI; EngPI

Manual Codes (EPI/S-X): W01-A07H2A; W02-C06; W04-V10E

43/9/8 (Item 8 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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015368392 \*\*Image available\*\*
WPI Acc No: 2003-429330/200340
Related WPI Acc No: 2003-392562

XRPX Acc No: N03-342773

Bit error concealing method for digital speech signal coding, involves comparing decoded signal parameter with set limitations based on which invalid parameter is identified

Patent Assignee: BROADCOM CORP (BROA-N)

Inventor: CHEN J

Number of Countries: 031 Number of Patents: 005

Patent Family:

Kind Week Patent No Kind Date Applicat No Date US 2001312794 20010817 200340 B US 20030036382 A1 20030220 Р US 2002344378 Ρ 20020104 US 2002222936 Α 20020819 WO 2002US26315 A 20020819 200340 WO 200317255 A1 20030227 WO 2002US26254 A 20020819 200340 Α2 20030227 WO 200317555 EP 2002759394 Α 20020819 200438 EP 1425562 Α2 20040609 WO 2002US26254 A 20020819 EP 2002757218 20020819 EP 1428206 Α1 20040616 Α 200439 WO 2002US26315 A 20020819

Priority Applications (No Type Date): US 2002222936 A 20020819; US 2001312794 P 20010817; US 2002344378 P 20020104

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes
US 20030036382 A1 22 H04Q-007/20 Provisional ap

Provisional application US 2001312794

Provisional application US 2002344378

WO 200317255 A1 E G10L-019/14
Designated States (Regional): AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
IE IT LU MC NL PT SE SK TR

WO 200317555 A2 E  $\pm$  H04L-000/00 Designated States (Regional): AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR

EP 1425562 A2 E G01L-011/00 Based on patent WO 200317555
Designated States (Regional): AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
IE IT LI LU MC NL PT SE SK TR

EP 1428206 A1 E G10L-019/14 Based on patent WO 200317255
Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

Abstract (Basic): US 20030036382 A1

NOVELTY - A signal parameter is encoded according to set limitations defined using signal parameter quantizer and the encoded signal parameter is compared with the limitations. When the limitations are violated, the decoded parameter is judged to be invalid. The invalid **signal** parameter is **changed** based on the **value** obtained from adjacent parameters.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) bit error detection method;
- (2) bit error detecting limitations design method;

- (3) threshold function definition method;
- (4) signal encoding method;
- (5) signal decoding method;
- (6) computer readable medium storing bit error concealing program;
- (7) computer readable storing bit error detection program;
- (8) computer readable medium storing threshold function defining program;
  - (9) computer readable medium storing encoding instructions;
  - (10) computer readable medium storing decoding instructions;
  - (11) bit error concealing apparatus;
  - (12) bit error detecting limitations setting apparatus;
  - (13) threshold function defining apparatus;
  - (14) bit error detector;
  - (15) signal encoder; and
  - (16) signal decoder.
- USE For digital speech signal coding system, digital communication.

ADVANTAGE - Improves speech **quality** by optimizing **channel** quantization without any noise. Enables quantizing different speech parameters irrespective of redundant factors.

DESCRIPTION OF DRAWING(S) - The figure shows the flowchart representing the encoding process.

pp; 22 DwgNo 1/8

Title Terms: BIT; ERROR; CONCEAL; METHOD; DIGITAL; SPEECH; SIGNAL; CODE; COMPARE; DECODE; SIGNAL; PARAMETER; SET; LIMIT; BASED; INVALID; PARAMETER; IDENTIFY

Derwent Class: P86; T01; W04

International Patent Class (Main): G01L-011/00; G10L-019/14; H04L-000/00; H04O-007/20

International Patent Class (Additional): G01L-019/00; G10L-021/02

File Segment: EPI; EngPI

Manual Codes (EPI/S-X): T01-S03; W04-V05E; W04-V05G

### 43/9/9 (Item 9 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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015041198 \*\*Image available\*\*
WPI Acc No: 2003-101714/200309

XRPX Acc No: N03-081180

Output-based speech quality evaluation method for voice communication system, involves comparing unknown corrupted speech signal to speech reference vectors of clean speech samples to determine distortions

Patent Assignee: QWEST COMMUNICATIONS INT INC (QWES-N)

Inventor: BAYYA A; VIS M

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No Kind Date Applicat No Kind Date Week US 6446038 B1 20020903 US 96627249 A 19960401 200309 B

Priority Applications (No Type Date): US 96627249 A 19960401

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 6446038 B1 8 G10L-015/00

Abstract (Basic): US 6446038 B1

NOVELTY - An unknown corrupted speech signal is compared to speech reference vectors that correspond to known clean speech samples, to determine distortions. The quality of the unknown corrupted speech signal is evaluated, and a score is generated based on the distortions.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

- Speech quality evaluating system in voice communication system;
- (2) Computer readable medium storing speech quality evaluating program.

USE - For evaluating quality of speech using corrupted output in voice communication system.

ADVANTAGE - The subjective score serves as indication of user acceptance of speech signals recorded under varying noise conditions and channel impairments as well as signals subjected to various noise suppression/signal enhancement techniques. Thus, predicts listener preference accurately by correlating highly with subjective scores over all possible distortions and noise types.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram illustrating the training process utilized to obtain speech reference vectors.

pp; 8 DwgNo 2/6

Title Terms: OUTPUT; BASED; SPEECH; QUALITY; EVALUATE; METHOD; VOICE; COMMUNICATE; SYSTEM; COMPARE; UNKNOWN; SPEECH; SIGNAL; SPEECH; REFERENCE; VECTOR; CLEAN; SPEECH; SAMPLE; DETERMINE; DISTORT

Derwent Class: P86; T01; W04

International Patent Class (Main): G10L-015/00

File Segment: EPI; EngPI

Manual Codes (EPI/S-X): T01-C08A; T01-N02B2; T01-S03; W04-V

### 43/9/10 (Item 10 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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015007390 \*\*Image available\*\* WPI Acc No: 2003-067907/200306

XRPX Acc No: N03-052668

Data processing method for receiver in MIMO communication system involves determining CSI indicating characteristics of MIMO channel for sending data streams processed in transmitter based on CSI part

Patent Assignee: QUALCOMM INC (QUAL-N); HOWARD S J (HOWA-I); KETCHUM J W (KETC-I); WALLACE M (WALL-I); WALTON J R (WALT-I)

Inventor: HOWARD S J; KETCHUM J W; WALLACE M; WALTON J R; WALLACE M S Number of Countries: 102 Number of Patents: 006

Patent Family:

Week Patent No Kind Date Applicat No Kind Date A1 20021121 WO 2002US14526 A 20020507 200306 B WO 200293784 US 20030035491 A1 20030220 US 2001854235 Α 20010511 200316 A1 20040204 EP 1386424 EP 2002736690 Α 20020507 200410 WO 2002US14526 20020507 Α

NO 200304981 A 20040106 WO 2002US14526 A 20020507 200412 NO 20034981 A 20031110

KR 2003093346 A 20031206 KR 2003714560 A 20031107 200425 TW 564604 A 20031201 TW 2002109683 A 20020509 200431

Priority Applications (No Type Date): US 2001854235 A 20010511

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200293784 A1 E 79 H04B-007/08

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR

IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

H04L-001/02 US 20030035491 A1

H04B-007/08 Based on patent WO 200293784 EP 1386424 A1 E

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT

LI LT LU LV MC MK NL PT RO SE SI TR H04B-007/08 NO 200304981 A

KR 2003093346 A

H04L-001/06

TW 564604 H04B-007/02

Abstract (Basic): WO 200293784 Al

NOVELTY - A decoded data stream is provided by processing the input signals with the symbol streams corresponding to the data streams. The signals without the components due to the decoded data stream are derived based on the input signals. A channel information (CSI) indicating the characteristics of a MIMO channel for sending the data streams processed at a transmitter based on a CSI part, is determined.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (a) a data transmission method;
- (b) a receiver;
- (c) and a MIMO communication system.

USE - For receiver in multiple-input multiple-output communication system.

ADVANTAGE - Ensures high performance for MIMO communication system by using combination of successive cancellation receiver processing technique and adaptive transmitter processing technique. Enables adjusting data processing in transmitter before data transmission based on estimated characteristic of MIMO channel.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of a receiver system.

pp; 79 DwgNo 5/9

Title Terms: DATA; PROCESS; METHOD; RECEIVE; COMMUNICATE; SYSTEM; DETERMINE ; INDICATE; CHARACTERISTIC; CHANNEL; SEND; DATA; STREAM; PROCESS;

TRANSMIT; BASED; PART

Derwent Class: W01; W02

International Patent Class (Main): H04B-007/02; H04B-007/08; H04L-001/06

International Patent Class (Additional): H04B-001/00; H04B-007/06; H04K-001/10; H04L-027/28

File Segment: EPI

Manual Codes (EPI/S-X): W01-A01A; W01-A03; W02-C03A1A

### (Item 11 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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014783487 \*\*Image available\*\*

WPI Acc No: 2002-604193/200265

XRPX Acc No: NO2-479242

Audio packet signal lack correction circuit for telecommunication system, has compensator which rectifies discontinuous points in audio signal output from decoder, based on operation state of switching circuit

Patent Assignee: NIPPON DENKI ENG KK (NIDE )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Applicat No Patent No Kind Date Kind Date 20020719 JP 2000401130 20001228 200265 B JP 2002204221 A Α

Priority Applications (No Type Date): JP 2000401130 A 20001228

Patent Details: Patent No Kind Lan Pg Main IPC Filing Notes JP 2002204221 A 7 H04L-001/00 Abstract (Basic): JP 2002204221 A NOVELTY - A switching circuit (4) outputs a voice parameter output from a delay buffer (2), when abandonment of a packet is detected. A decoder (5) outputs an audio signal by decoding the voice parameter. A compensator rectifies the discontinuous points in the audio signal, based on operation state of the switching circuit. USE - For telecommunication system. ADVANTAGE - The quality of reproduced audio signal is ensured, by rectifying the discontinuous points in reproduced signal using the compensator. DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of the audio packet signal lack correction circuit. (Drawing includes non-English language text). Delay buffer (2) Switching circuit (4) Decoder (5) pp; 7 DwgNo 1/8 Title Terms: AUDIO; PACKET; SIGNAL; LACK; CORRECT; CIRCUIT; TELECOMMUNICATION; SYSTEM; COMPENSATE; RECTIFY; DISCONTINUE; POINT; AUDIO ; SIGNAL; OUTPUT; DECODE; BASED; OPERATE; STATE; SWITCH; CIRCUIT Derwent Class: P86; W01; W04 International Patent Class (Main): H04L-001/00 International Patent Class (Additional): G10L-013/00; G10L-019/00 File Segment: EPI; EngPI Manual Codes (EPI/S-X): W01-A01; W04-V; W04-V05G (Item 12 from file: 350) 43/9/12 DIALOG(R) File 350: Derwent WPIX (c) 2004 Thomson Derwent. All rts. reserv. 014447796 \*\*Image available\*\* WPI Acc No: 2002-268499/200231 XRPX Acc No: NO2-208956 Audible error detector and controller utilizing channel quality data and iterative synthesis, errors occurring in synthesized speech are detected by searching for typical sound with stringency dependent upon channel quality Patent Assignee: NOKIA CORP (OYNO ); NOKIA INC (OYNO ); MIKKOLA H J (MIKK-I); ROTOLA-PUKKILA J (ROTO-I); VAINIO J (VAIN-I); NOKIA MOBILE PHONES LTD (OYNO ) Inventor: MIKKOLA H J; ROTOLA-PUKKILA J; VAINIO J Number of Countries: 095 Number of Patents: 005 Patent Family: Applicat No Patent No Kind Date Kind Date Week 20010604 A1 20011213 WO 2001IB965 Α 200231 B WO 200195313 20010604 Α 20011217 AU 200162571 Α 200231 AU 200162571 US 20020002456 A1 20020103 US 2000209860 Р 20000607 200231 20010509 US 2001852127 Α 20010604 EP 1292943 A1 20030319 EP 2001936704 Α 200322 20010604 WO 2001IB965 Α 20030730 CN 2001810686 20010604 CN 1433562 Α Α 200365

Priority Applications (No Type Date): US 2000209860 P 20000607; US

2001852127 A 20010509

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes WO 200195313 A1 E 23 G10L-019/00 Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW G10L-019/00 Based on patent WO 200195313 AU 200162571 A G10L-013/00 Provisional application US 2000209860 US 20020002456 A1 A1 E G10L-019/00 Based on patent WO 200195313 EP 1292943 Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR G10L-019/00 CN 1433562 Α Abstract (Basic): WO 200195313 A1 NOVELTY - Errors occurring in synthesized speech are detected by searching for atypical sound with a stringency dependent upon quality . The greater the channel quality deficiency is, the higher the typically standards will be. Errors are controlled by either re - synthesizing the signal in an iterative way using typically standards which vary with channel quality deficiency, or by modifying the output signal using typicality standards which vary with channel quality deficiency, or both. DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a method USE - For audible communication. For speech coding and channel coding ADVANTAGE - Improves detection and concealment of audio errors occurring as result of imperfect transmission channel quality DESCRIPTION OF DRAWING(S) - The figure shows a diagrammatic representation of the iterative processor. pp; 23 DwgNo 3/3 Title Terms: AUDIBLE; ERROR; DETECT; CONTROL; UTILISE; CHANNEL; QUALITY; DATA; ITERATIVE; SYNTHESIS; ERROR; OCCUR; SYNTHESIS; SPEECH; DETECT; SEARCH; TYPICAL; SOUND; DEPEND; CHANNEL; QUALITY Derwent Class: P86; U21; W01; W04 International Patent Class (Main): G10L-013/00; G10L-019/00 International Patent Class (Additional): H03M-013/45; H04L-001/00; H04L-001/20 File Segment: EPI; EngPI Manual Codes (EPI/S-X): U21-A06; W01-A01; W01-A01C; W04-V05G ? t43/9/14,17-21,23 (Item 14 from file: 350) 43/9/14 DIALOG(R) File 350: Derwent WPIX (c) 2004 Thomson Derwent. All rts. reserv. \*\*Image available\*\* 014074805 WPI Acc No: 2001-559018/200163 XRPX Acc No: N01-415512 Voice coding apparatus for coding background noise signal on voice signal, has multiplexer that locally reproduces synchronized signal using smoothed signal and feeding out combination of outputs of preset circuits Patent Assignee: NEC CORP (NIDE Inventor: OZAWA K Number of Countries: 028 Number of Patents: 003 Patent Family:

Kind Date Applicat No Kind Date Week Patent No A2 20010516 EP 2000124232 Α 20001109 200163 B EP 1100076 20010525 JP 99319534 Α 19991110 200163 JP 2001142499 A CA 2325322 A1 20010510 CA 2325322 Α 20001109 200163

Priority Applications (No Type Date): JP 99319534 A 19991110

Patent Details:

Patent No Kind Lan Pq Main IPC Filing Notes

EP 1100076 A2 E 16 G10L-019/14

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

JP 2001142499 A 15 G10L-019/12

CA 2325322 A1 E G10L-019/12

Abstract (Basic): EP 1100076 A2

NOVELTY - Discriminating circuit (300) judges if pertinent mode is a preset mode based on feature quantity extracted from voice signal. Smoothing circuit (450) executes time-wise smoothing of either gain or level of excitation signal, adaptive codebook gain, spectral parameter, using which multiplexer (400) reproduces synthesized signal and feeds out combination of outputs of parameter calculating, mode discriminating, adaptive codebook, excitation and gain quantizing circuits.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (a) Voice decoding apparatus;
- (b) Voice coding method;
- (c) Voice decoding method

USE - For coding background noise signal superimposed on voice signal even at a low bit rate.

ADVANTAGE - Provides coded voice less subject to sound quality deterioration by suppressing local time-wise parameter variations in the background noise part even at a low bit, since a synthesized signal is locally reproduced using the data obtained by time-wise smoothing of either one of spectral parameter gain of adaptive codebook, gain of excitation codebook and RMS of excitation signal. Satisfactorily codes the background noise part without adversely affecting the voice time section, even when the coding voice is superimposed with background noise at a low bit, by executing process only in a particular time section.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of voice coding apparatus.

Mode discriminating circuit (300)

Multiplexer (400)

Smoothing circuit (450)

pp; 16 DwgNo 1/3

Title Terms: VOICE; CODE; APPARATUS; CODE; BACKGROUND; NOISE; SIGNAL; VOICE; SIGNAL; MULTIPLEX; LOCAL; REPRODUCE; SIGNAL; SMOOTH; SIGNAL; FEED; COMBINATION; OUTPUT; PRESET; CIRCUIT

Derwent Class: P86; W04

International Patent Class (Main): G10L-019/12; G10L-019/14

International Patent Class (Additional): G10L-011/06

File Segment: EPI; EngPI

Manual Codes (EPI/S-X): W04-V05G

### 43/9/17 (Item 17 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013867478 \*\*Image available\*\*

WPI Acc No: 2001-351690/200137 XRPX Acc No: N01-255321 Image data transmission system for news broadcasting receiver, has image signal encoding parameter which changes automatically, to reduce error detected due to degradation of transmission quality Patent Assignee: KOKUSAI DENKI KK (KOKZ ) Number of Countries: 001 Number of Patents: 001 Patent Family: Applicat No Patent No Kind Date Week Kind Date JP 2001111995 A 20010420 JP 99291248 Α 19991013 200137 B Priority Applications (No Type Date): JP 99291248 A 19991013 Patent Details: Filing Notes Patent No Kind Lan Pg Main IPC 8 H04N-007/24 JP 2001111995 A Abstract (Basic): JP 2001111995 A NOVELTY - A transmitter (3) transmits encoded image signal to receiver (4) through transmission line, based on which transmission quality of transmission line is detected. The presence of defect in transmission line is indicated to transmitter. The image signal encoding parameter is changed automatically, to reduce error detected due to degradation of transmission quality. USE - For transmission of image data picked up by television camera which is broadcast to remote places e.g. for news broadcasting. ADVANTAGE - The defect in transmission line is detected by transmitting encoded image data, due to which the disorder in receiving the image is prevented. DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of image data transmission system. (Drawing includes non-English language text). Transmitter (3) Receiver (4) pp; 8 DwgNo 1/3 Title Terms: IMAGE; DATA; TRANSMISSION; SYSTEM; NEWS; BROADCAST; RECEIVE; IMAGE; SIGNAL; ENCODE; PARAMETER; CHANGE; AUTOMATIC; REDUCE; ERROR; DETECT; DEGRADE; TRANSMISSION; QUALITY Derwent Class: W01; W02 International Patent Class (Main): H04N-007/24 International Patent Class (Additional): H04B-014/04; H04L-001/00; HO4M-011/00; HO4N-001/41 File Segment: EPI Manual Codes (EPI/S-X): W01-A01; W01-C05; W01-C05B3F; W02-C06; W02-F07; W02-J03B 43/9/18 (Item 18 from file: 350) DIALOG(R) File 350: Derwent WPIX (c) 2004 Thomson Derwent. All rts. reserv. \*\*Image available\*\* 013712552 WPI Acc No: 2001-196776/200120 XRPX Acc No: N01-140652 Video signal recording and reproducing method for use in vehicle, involves transmitting discarded data to decoder after synthesizing data read from memory Patent Assignee: KOKUSAI DENSHIN DENWA CO LTD (KOKU ) Number of Countries: 001 Number of Patents: 001 Patent Family:

Patent No

Kind

Date

Applicat No

Kind

Date

Week

Priority Applications (No Type Date): JP 99185212 A 19990630 Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes JP 2001016585 A 6 H04N-007/24

Abstract (Basic): JP 2001016585 A

NOVELTY - The bit rate of video signal is changed, depending on transmission line quality to produce transmitting data. A control parameter which shows the deleted video data to transmitting data is transmitted along with video frame pointer from beginning of transmission. A video synthesizer (18) in receiving side synthesizes data read from memory (16) and transmits discarded data to video decoder (13).

DETAILED DESCRIPTION - A memory (16) in receiving side receives decoded video data from decoder (12). An addition data extractor (17) extracts additional data such as control parameter, video frame pointer from memory (16). Based on additional data, discarded data are read from memory (6) and transmitted to decoder (13). An INDEPENDENT CLAIM is also included for video **signal** recording and **reproducing** apparatus.

USE - In vehicle for recording and **reproducing** video **signal** transmitted to vehicle via transmission line using e.g. transmission control protocol/internet protocol.

ADVANTAGE - Enables high resolution image to be reproduced and displayed. Prevents reduction in utilization efficiency of transmission line.

DESCRIPTION OF DRAWING(S) - The figure shows block diagram of recording and reproducing apparatus.

Memories (6,16)

Decoders (12,13)

Extractor (17)

Synthesizer (18)

pp; 6 DwgNo 1/4
Title Terms: VIDEO; SIGNAL; RECORD; REPRODUCE; METHOD; VEHICLE; TRANSMIT;
DISCARDED; DATA; DECODE; AFTER; DATA; READ; MEMORY

Derwent Class: T03; W01; W02; W04

International Patent Class (Main): H04N-007/24

International Patent Class (Additional): G11B-020/10; H04L-001/00;

H04N-005/92

File Segment: EPI

Manual Codes (EPI/S-X): T03-P01; W01-A01; W02-F07; W04-F01

### 43/9/19 (Item 19 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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013706358 \*\*Image available\*\*
WPI Acc No: 2001-190582/200119

XRPX Acc No: N01-135400

Voice communication system for mobile communication application, has voice decoder to decode received signals based on signal output from channel state estimator

Patent Assignee: COMSAT CORP (COMS-N)

Inventor: BHASKAR B R R U; HEMMATI F

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No Kind Date Applicat No Kind Date Week

Priority Applications (No Type Date): US 96734086 A 19961021

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 6154499 A 18 H04L-027/00

Abstract (Basic): US 6154499 A

NOVELTY - The nested voice code of voice encoder generates a multiple levels of encoded speech signals. The channel encoder encodes the level and transmits data at highest rate of generated level. The channel state estimator (710) estimates the channel state based on which voice decoder (706) decodes the received signals at any one of the levels.

DETAILED DESCRIPTION - The basic level having **speech signals** sufficient to **reproduce** at least an intelligent content of speech and other level comprising voice parameters representative of voice is progressive manner are generated by nested voice coder. INDEPENDENT CLAIMS are also included for the following:

- (a) receiver;
- (b) voice communication method

USE - E.g. two-way voice pager, HF-VHF packet radio for mobile applications such as land mobile vehicles aeronautical and maritime systems.

ADVANTAGE - Since decoder can adopt to **channel state varying conditions** by using reliable subset of bits, intelligible and efficient voice link can be maintained even under poor **channel conditions**.

DESCRIPTION OF DRAWING(S) - The figure shows the receiver block diagram.

Voice decoder (706)

Channel state estimator (710)

pp; 18 DwgNo 7/9

Title Terms: VOICE; COMMUNICATE; SYSTEM; MOBILE; COMMUNICATE; APPLY; VOICE; DECODE; DECODE; RECEIVE; SIGNAL; BASED; SIGNAL; OUTPUT; CHANNEL; STATE; ESTIMATE

Derwent Class: W01; W02

International Patent Class (Main): H04L-027/00

File Segment: EPI

Manual Codes (EPI/S-X): W01-A03B; W01-A06G2; W01-A09; W01-B05A1A;

W02-C03C1A

### 43/9/20 (Item 20 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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013397158 \*\*Image available\*\*
WPI Acc No: 2000-569096/200053

XRPX Acc No: N00-420628

Orthogonal frequency division multiplex apparatus for digital mobile communication, judges subcarrier corresponding to signal, by comparing signal level with maximum threshold of signal level

Patent Assignee: MATSUSHITA DENKI SANGYO KK (MATU )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No Kind Date Applicat No Kind Date Week
JP 2000224140 A 20000811 JP 9925850 A 19990203 200053 B

Priority Applications (No Type Date): JP 9925850 A 19990203

Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
JP 2000224140 A 15 H04J-011/00

Abstract (Basic): JP 2000224140 A

NOVELTY - A detector (119) detects level of signal assigned to each sub-carrier. A decision unit (117) judges the sub-carrier corresponding to the signal, by comparing the signal level with maximum threshold of signal level. A modification unit varies the threshold value adaptively, based on circuit quality assessed value for every unit burst.

USE - For digital mobile communication.

ADVANTAGE - As the threshold value used for choosing the sub-carrier is changed **depending** on **circuit quality**, reliability of re-sending efficiency and demodulation signal is attained.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of orthogonal frequency division multiplex apparatus.

Decision unit (117)

Detector (119)

pp; 15 DwgNo 1/13

Title Terms: ORTHOGONAL; FREQUENCY; DIVIDE; MULTIPLEX; APPARATUS; DIGITAL; MOBILE; COMMUNICATE; JUDGEMENT; SUBCARRIER; CORRESPOND; SIGNAL; COMPARE; SIGNAL; LEVEL; MAXIMUM; THRESHOLD; SIGNAL; LEVEL

Derwent Class: W01; W02

International Patent Class (Main): H04J-011/00

International Patent Class (Additional): H04L-001/16

File Segment: EPI

Manual Codes (EPI/S-X): W01-A01A; W02-K07

### 43/9/21 (Item 21 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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013338299 \*\*Image available\*\*
WPI Acc No: 2000-510238/200046

XRPX Acc No: N00-377856

Hot standby circuit switching system for digital wireless communication, transmits dummy frame signal instead of transmission signal to opposing station when input signal is frame synchronization detachment type

Patent Assignee: NEC CORP (NIDE )

Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No Kind Date Applicat No Kind Date Week JP 2000196505 A 20000714 JP 98370879 Α 19981225 200046 B JP 98370879 B2 20021125 JP 3351373 Α 19981225 200301

Priority Applications (No Type Date): JP 98370879 A 19981225

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

JP 2000196505 A 7 H04B-001/74

JP 3351373 B2 7 H04B-001/74 Previous Publ. patent JP 2000196505

Abstract (Basic): JP 2000196505 A

NOVELTY - A generator (306) generates dummy frame signal containing decision information **relating** to **circuit** degradation **condition**. A judging **circuit** judges degradation cause of input signal, based on natural phenomenon. A selecting circuit (307) selectively transmits dummy frame signal in replacement with transmission signal, to opposing terminal station when input signal is a frame synchronization

detachment type.

DETAILED DESCRIPTION - One or more reproduction repeaters are provided between terminal stations. The repeater judges the **circuit** degradation **condition based** on input signal condition.

USE - In digital wireless communication.

ADVANTAGE - Enables judgment of degradation of circuit quality by natural phenomenon by the terminal station and hence unnecessary circuit switching need not be performed. Increases maintenance efficiency of circuit by communication manufacturers by simplified identification of circuit quality degradation.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of demodulation signal processor of reproduction repeater and modulating signal processor.

Generator (306)

Selecting circuit (307)

pp; 7 DwgNo 2/6

Title Terms: HOT; STANDBY; CIRCUIT; SWITCH; SYSTEM; DIGITAL; WIRELESS; COMMUNICATE; TRANSMIT; DUMMY; FRAME; SIGNAL; INSTEAD; TRANSMISSION; SIGNAL; OPPOSED; STATION; INPUT; SIGNAL; FRAME; SYNCHRONISATION; DETACH; TYPE

Derwent Class: W01

International Patent Class (Main): H04B-001/74

International Patent Class (Additional): H04L-001/22; H04M-003/22;

H04M-003/26 File Segment: EPI

Manual Codes (EPI/S-X): W01-A06A2; W01-C02A1; W01-C02A5

### 43/9/23 (Item 23 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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012836059 \*\*Image available\*\*
WPI Acc No: 2000-007891/200001

XRPX Acc No: N00-007120

Optical measuring apparatus for monitoring of optical transmission line - analyzes condition detecting signal and computes its relative value

Patent Assignee: ANDO ELECTRIC CO LTD (ANDN ) Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No Kind Date Applicat No Kind Date Week
JP 11287740 A 19991019 JP 98103332 A 19980331 200001 B

Priority Applications (No Type Date): JP 98103332 A 19980331

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

JP 11287740 A 9 G01M-011/02

Abstract (Basic): JP 11287740 A

NOVELTY - An analysis circuit analyzes a condition detecting signal caused depending on condition of passage of a measurement signal through a transmission line, and computes condition detecting signal relative value. An adjustment circuit (16) controls the analysis circuit and adjusts the condition detecting signal suitably. An output unit outputs analysis result of the analysis circuit. DETAILED DESCRIPTION - A signal generator outputs a measurement signal to a transmission line.

USE - For measuring variation of the output level of light pulse or wavelength, passing through optical transmission line.

ADVANTAGE - Prevents that S/N ratio becomes bad and transmission

line is measured correctly. Prevents damage of APD. DESCRIPTION OF DRAWING(S) - The figure shows the block diagram showing component of optical measuring apparatus. (16) Adjustment circuit.

Dwg.1/4

Title Terms: OPTICAL; MEASURE; APPARATUS; MONITOR; OPTICAL; TRANSMISSION; LINE; CONDITION; DETECT; SIGNAL; COMPUTATION; RELATIVE; VALUE

Derwent Class: S02

International Patent Class (Main): G01M-011/02

File Segment: EPI

Manual Codes (EPI/S-X): S02-J04A1

? t43/9/28

### 43/9/28 (Item 28 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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010762424 \*\*Image available\*\*
WPI Acc No: 1996-259379/199626

XRPX Acc No: N96-218264

Signal reconstruction method for deriving primary output signal from several secondary signals - filtering second input signal and combining with first input signal to derive intermediate signal and then processing intermediate signal through second filter

Patent Assignee: LOCKHEED MISSILES & SPACE CO INC (LOCK )

Inventor: RICE B F; WILHOYTE M E

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No Kind Date Applicat No Kind Date Week
US 5519735 A 19960521 US 94234231 A 19940428 199626 B

Priority Applications (No Type Date): US 94234231 A 19940428

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 5519735 A 20 H04B-007/12

Abstract (Basic): US 5519735 A

The **signal reconstruction** method involves first receiving two separate input signals, pref. receiving two frequency ranges of a transmitted signal in order to capture the entire bandwidth. The second input signal is processed by a filter with a given set of parameters and then combined with the first input signal to derive an intermediate output signal. The intermediate signal is processed by a second filter to derive the output signal.

The second processing step consists of deriving a set of orthogonal parallel filtered signal components, pref. using a lattice filter, from the intermediate output signal, and processing them in parallel. The primary output can be used to determine an error component and the respective filter parameters are adjusted to reduce this error. Pref. the received signals are sampled and converted to digital signals. One of the digital input signals is then time delayed relative to the other to introduce a selected frequency difference between the two signals.

ADVANTAGE - Capable of tolerating variable time delays, frequency offsets (up to 0.01% of baud rate) and variable overlaps. Lattice filter provides faster data convergence therefore allowing rapid tracking of **changes** in **channel conditions**.

Dwg.8/12
Title Terms: SIGNAL; RECONSTRUCT; METHOD; DERIVATIVE; PRIMARY; OUTPUT; SIGNAL; SECONDARY; SIGNAL; FILTER; SECOND; INPUT; SIGNAL; COMBINATION; FIRST; INPUT; SIGNAL; DERIVATIVE; INTERMEDIATE; SIGNAL; PROCESS; INTERMEDIATE; SIGNAL; THROUGH; SECOND; FILTER

Index Terms/Additional Words: ADAPTIVE ; MULTICHANNEL

Derwent Class: U22; W01; W02 International Patent Class (Main): H04B-007/12 International Patent Class (Additional): H04L-001/02 File Seament: EPI Manual Codes (EPI/S-X): U22-G01A5; U22-G01D; W01-A01A; W02-C03A3; W02-C03A9 ; W02-G03B9 PLEASE ENTER A COMMAND OR BE LOGGED OFF IN 5 MINUTES ? t43/9/36,41,44-45,48 43/9/36 (Item 36 from file: 350) DIALOG(R) File 350: Derwent WPIX (c) 2004 Thomson Derwent. All rts. reserv. \*\*Image available\*\* 009306545 WPI Acc No: 1992-433954/199252 XRPX Acc No: N92-331160 Mobile radio system using e.g. quadrature amplitude modulation - uses transceivers to assess quality of link and modify signal constellation and includes QPSK signal indicating which constellation has Patent Assignee: BRITISH TELECOM PLC (BRTE ) Inventor: WEBB W T Number of Countries: 037 Number of Patents: 012 Patent Family: Kind Date Applicat No Kind Date Week Patent No WO 9222162 Α1 19921210 WO 92GB988 Α 19920602 199252 AU 9217724 19930108 AU 9217724 Α 19920602 199315 Α WO 92GB988 Α 19920602 EP 587620 Α1 19940323 EP 92910845 Α 19920602 199412 WO 92GB988 Α 19920602 JP 92509872 JP 6507763 W 19940901 Α 19920602 199439 WO 92GB988 Α 19920602 AU 656972 В 19950223 AU 9217724 Α 19920602 199515 EP 587620 В1 19980107 EP 92910845 Α 19920602 199806 WO 92GB988 Α 19920602 19980212 DE 623961 DE 69223961 Ε Α 19920602 199812 EP 92910845 19920602 Α WO 92GB988 19920602 Α EP 92910845 ES 2112318 Т3 19980401 Α 19920602 199819 SG 963264 19980417 19920602 199826 SG 47627 Α1 Α US 5828695 WO 92GB988 19920602 199850 Α 19981027 Α US 94162016 19940218 Α CA 2110578 С 19990427 CA 2110578 Α 19920602 199935 WO 92GB988 Α 19920602 JP 92509872 19920602 JP 3193378 B2 20010730 Α 200146 WO 92GB988 19920602 Α Priority Applications (No Type Date): GB 9114556 A 19910705; GB 9111856 A 19910603 Cited Patents: 2.Jnl.Ref; US 4495619; US 4956851 Patent Details: Patent No Kind Lan Pg Main IPC Filing Notes A1 E 25 H04L-027/34 WO 9222162 Designated States (National): AU BB BG BR CA CS FI GB HU JP KP KR LK MG MW NO PL RO RU SD US Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LU MC NL OA SE AU 9217724 H04L-027/34 Based on patent WO 9222162 EP 587620 A1 E 2 H04L-027/34 Based on patent WO 9222162

Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LI LU MC NL

SE JP 6507763 W H04B-007/26 Based on patent WO 9222162 В H04L-027/34 Previous Publ. patent AU 9217724 AU 656972 Based on patent WO 9222162 B1 E 14 H04L-027/34 Based on patent WO 9222162 EP 587620 Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LI LU MC NL Based on patent EP 587620 Ε H04L-027/34 DE 69223961 Based on patent WO 9222162 Based on patent EP 587620 ES 2112318 Т3 H04L-027/34 A1 H04L-027/34 SG 47627 Based on patent WO 9222162 US 5828695 Α H04B-001/38 Based on patent WO 9222162 CA 2110578 C E H04L-027/34 JP 3193378 B2 11 H04B-007/26 Previous Publ. patent JP 6507763 Based on patent WO 9222162

Abstract (Basic): WO 9222162 A

The system comprises a pair of stations having transceivers which receive signals from the other station and assess the received signals. A circuit selects a transmission modulation state on the basis of the assessment. A radio transmitter sends signals to the other station using a modulation scheme having a number of modulation states.

A circuit adjusts the transmitting state of the trnsmitter to be the selected modulation **state**. A signalling **circuit** includes in the signals to be transmitted to the other station an indication of the selected modulation state.

ADVANTAGE - Transmissions adapted to transmission conditions to e.g. reduce problem of fast fading. Provides near constant BER over wide range of channel SNRs. Suitable for data services.

Dwg.3/9

Abstract (Equivalent): EP 587620 B

The system comprises a pair of stations having transceivers which receive signals from the other station and assess the received signals. A circuit selects a transmission modulation state on the basis of the assessment. A radio transmitter sends signals to the other station using a modulation scheme having a number of modulation states.

A circuit adjusts the transmitting state of the trnsmitter to be the selected modulation **state**. A signalling **circuit** includes in the signals to be transmitted to the other station an indication of the selected modulation state.

ADVANTAGE - Transmissions adapted to transmission conditions to e.g. reduce problem of fast fading. Provides near constant BER over wide range of channel SNRs. Suitable for data services.

Dwg.1/9

Title Terms: MOBILE; RADIO; SYSTEM; QUADRATURE; AMPLITUDE; MODULATE; TRANSCEIVER; ASSESS; QUALITY; LINK; MODIFIED; SIGNAL; QPSK; SIGNAL; INDICATE

Derwent Class: W01; W02

International Patent Class (Main): H04B-001/38; H04B-007/26; H04L-027/34

International Patent Class (Additional): H04B-001/40; H04L-001/16

File Segment: EPI

Manual Codes (EPI/S-X): W01-A09C; W01-A09E; W02-C03C3C; W02-C03C3E;
W02-G02A2

### 43/9/41 (Item 41 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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004398065

WPI Acc No: 1985-224943/198537

XRPX Acc No: N85-168952

Modem for transmitting digital signals over telephone lines - has quality monitor and rate control for adapting communication rate to line quality

Patent Assignee: CODEX CORP (RENI )

Inventor: QURESHI S U H; SEITZ K W; WILSON R M Number of Countries: 013 Number of Patents: 006

Patent Family:

_		-							
Patent No		Kind	Date	App	olicat No	Kind	Date	Week	
Ε	P 154565	Α	19850911	EP	85301614	А	19850308	198537	В
J	P 61001130	A	19860107	JP	8546315	Α	19850308	198607	
Ū	S 4756007	A	19880705	US	84587386	Α	19840308	198829	
_	A 1253229	A	19890425					198921	
F.	P 154565	В	19910925					199139	
_	E 3584176	G	19911031					199145	
	L 0001110	_							

Priority Applications (No Type Date): US 84587386 A 19840308 Cited Patents: 2.Jnl.Ref; A3...8728; EP 39191; JP 59023639; No-SR.Pub; US 3536840; US 3665394

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 154565 A E 32

Designated States (Regional): AT BE CH DE FR GB IT LI NL SE

EP 154565 B

Designated States (Regional): AT BE CH DE FR GB IT LI NL SE

### Abstract (Basic): EP 154565 A

A modem has a device to transmit information signals to a remote device over a channel at any one of a number of communication rates. A device receives information signals from the remote device, and a circuit monitors the quality of the channel on the basis of the received information signals. A rate control selects a current communication rate based on the channel quality. The control has a fall forward circuit adapted to indicate that an increase in the current communication rate is desired, and to implement the increase when the remote device concurs.

The rate control may also have a fall back circuit for making fall back decisions which unilaterally decrease the current communication rate. The receiver may also include adaptive equalisation and demodulation circuitry for equalising and demodulating the received information signals. The rate control may have a save equaliser circuit responsive to the quality monitor to update the values when the channel quality is good and for reinitialising the values when the channel quality is poor.

ADVANTAGE - Modem has ability to adapt data signalling rate to line quality.

Dwg.5/6

Abstract (Equivalent): EP 154565 B

A modem comprising; transmission means adapted to transmit information signals to a remote device over a channel at any one of a multiplicity of transmission rates, reception means adapted to receive information signals from said remote device over said channel at any one of a multiplicity of reception rates, quality-monitoring means adapted to monitor the quality of said channel on the basis of said received information signals, and rate control means adapted to selected a current reception rate based on channel quality; said modem being characterised in that said rate control means comprises fall forward means adapted to indicate to said remote device that an increase in said current reception rate to a higher reception rate is desired, based on said channel quality as perceived by said quality-monitoring means and to implement said increase only when said

remote device indicates its concurrence in implicating said increase, based upon said remote device's own analysis of said channel quality. (18pp)

Abstract (Equivalent): US 4756007 A

The modem includes a transmitter for sending information signals to a remote device over a channel at any one of a multiplicity of communication rates. Information signals are received from the remote device over the channel. The quality of the channel is monitored on the basis of the received information signals. A rate controller responsive to the quality-monitor selects a current communication rate based on the channel quality. The rate controller includes a fall forward device for indicating that an increase in the current communication rate to a higher value is desired and for implementing the increase when the remote device concurs.

USE - For transmission over band-wanted channels, e.g. telephone lines. (13pp  $\,$ 

Title Terms: MODEM; TRANSMIT; DIGITAL; SIGNAL; TELEPHONE; LINE; QUALITY; MONITOR; RATE; CONTROL; ADAPT; COMMUNICATE; RATE; LINE; QUALITY

Derwent Class: W01

International Patent Class (Additional): H04L-001/12 ; H04L-027/00

File Segment: EPI

Manual Codes (EPI/S-X): W01-A01; W01-A09; W01-C05B

### 43/9/44 (Item 44 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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001680747

WPI Acc No: 1977-B7218Y/197709

Centrally controlled telephone exchange has condition lines - whose monitored states change between free, actuated and engaged

Patent Assignee: SIEMENS-ALBIS AG (SIEI )

Number of Countries: 003 Number of Patents: 003

Patent Family:

Patent No Kind Date Applicat No Kind Date Week 197709 DE 2624402 В 19770224 19770704 197738 ZA 7605034 Α 197929 CH 612052 Α 19790629

Priority Applications (No Type Date): CH 7511986 A 19750916

Abstract (Basic): DE 2624402 B

The centrally controlled telephone exchange produces control signals in response to changes in subscriber line condition . A certain number of subscribers within a group have actuating lines of a first type that change state from free to actuated and lines of a second type that change state from engaged to free. Both types of line lead from the subscribers' loop circuits.

An indicator detects the changes in states on these two types of line. The lines are connected in turn by a selection circuit to the indicator. Requests for various actions are then passed to the central control from the indicator depending on line state.

control from the indicator depending on line state.
Title Terms: CENTRAL; CONTROL; TELEPHONE; EXCHANGE; CONDITION; LINE;
MONITOR; STATE; CHANGE; FREE; ACTUATE; ENGAGE

Derwent Class: W01; W02

International Patent Class (Additional): H04G-000/00; H04M-003/12;

H04Q-003/28

File Segment: EPI

(Item 45 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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001546884

WPI Acc No: 1976-L9831X/197651

Line condition change detector for telephone exchange - has decaying acoustic signal supplied to subscribers circuit at operator board

Patent Assignee: DEUT TELEPHONWERKE & KABELIND (DETK )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No Applicat No Kind Date Week Kind Date 19761208 197651 B DE 2108306 В

Priority Applications (No Type Date): DE 2108306 A 19710218

Abstract (Basic): DE 2108306 B

change detector, for telephone exchanges, The line condition releases an acoustic signal at the operator's board when line condition changes . The acoustic signal is generated by a diode (D) and a capacitor (C1) acting as switch. The drop in the acoustic signal is caused by the discharge of the capacitor. The discharge of the capacitor can be set by a variable resistor (R5). The acoustic signal, whose volume decreases with time, is coupled to the operator board's subscriber line. The reduction in volume with time allows several such acoustic signals to be distinguished from one another.

Title Terms: LINE; CONDITION; CHANGE; DETECT; TELEPHONE; EXCHANGE; DECAY; ACOUSTIC; SIGNAL; SUPPLY; SUBSCRIBER; CIRCUIT; OPERATE; BOARD

Derwent Class: W01

International Patent Class (Additional): H04M-003/22; H04Q-001/20

File Segment: EPI

(Item 48 from file: 347) 43/9/48

DIALOG(R) File 347: JAPIO

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\*\*Image available\*\* 05618218

VOICE QUALITY WARNING SYSTEM FOR DIGITAL PORTABLE TELEPHONE SYSTEM

PUB. NO.:

09-233018 [JP 9233018 A]

PUBLISHED:

September 05, 1997 (19970905)

INVENTOR(s): SHIONO KATSUMI

ONO SHIGERU

APPLICANT(s): SAITAMA NIPPON DENKI KK [000000] (A Japanese Company or

Corporation), JP (Japan)

NEC CORP [000423] (A Japanese Company or Corporation), JP

(Japan)

APPL. NO.:

08-041127 [JP 9641127]

FILED:

February 28, 1996 (19960228)

INTL CLASS:

[6] H04B-007/26; H04B-014/06; H04L-001/00

JAPIO CLASS:

44.2 (COMMUNICATION -- Transmission Systems); 44.3

(COMMUNICATION -- Telegraphy); 44.4 (COMMUNICATION --

Telephone); 46.2 (INSTRUMENTATION -- Testing)

### ABSTRACT

PROBLEM TO BE SOLVED: To allow the digital portable telephone system to provide the output of quality deterioration warning information in response to the degree of deterioration in a reproduced voice signal by taking correlation between deterioration in channel and voice quality .

SOLUTION: A decoding section 22 of a digital signal processor(DSP) conducts decoding error correction processing of coded voice data and when a CRC cyclic redundancy check error detector 22-6 detects it that voice data has an error, a bad frame masking processing section 22-10 conducts processing of preventing deterioration in voice quality. A warning tone decision processing section 61 of a main CPU accumulates consecutive frames of voice data by a prescribed number of frames while shifting a status number of bad frame masking one by one frame each, decides the propriety of the output of warning information depending on the accumulated sum and controls a warning tone output device 31 to outputs a warning tone when the section 61 decides its propriety of output? t43/9/58

43/9/58 (Item 58 from file: 347)

DIALOG(R) File 347: JAPIO

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01143550 \*\*Image available\*\*

MONITORING SYSTEM FOR CIRCUIT QUALITY

PUB. NO.: 58-080950 [JP 58080950 A] PUBLISHED: May 16, 1983 (19830516)

PUBLISHED: May 16, 1983 (198305 INVENTOR(s): YOSHIDA YASUTSUNE

SEGUCHI HIROSHI TAGASHIRA YOSHIMI

APPLICANT(s): NEC CORP [000423] (A Japanese Company or Corporation), JP

(Japan)

APPL. NO.: 56-179395 [JP 81179395] FILED: November 09, 1981 (19811109)

INTL CLASS: [3] H04L-027/00; H04B-003/06; H04L-001/00

JAPIO CLASS: 44.3 (COMMUNICATION -- Telegraphy); 44.2 (COMMUNICATION --

Transmission Systems)

JOURNAL: Section: E, Section No. 190, Vol. 07, No. 174, Pg. 130,

August 02, 1983 (19830802)

### ABSTRACT

PURPOSE: To provide a **circuit quality** monitoring function, by supplying a control signal to an automatic equalizer in a digital transmission circuit, and thus causing frequency amplitude distortion or inter-code interference on a transmission line, and only providing a simple additional circuit.

CONSTITUTION: For a 16QAM (orthogonal phase amplitude modulation) system, a signal from a transmitter 1 is inputted to an automatic equalizer 3 through a space diversity circuit 2 for compensating the multipath fading. The equalizer 3 compensates frequency amplitude distortion or compensates inter-code interference by the time axis to send the resulting signal to a demodulator 4. When the initial value of the frequency amplitude distortion is supplied to the equalizer 3 by a circuit quality monitoring control signal E(sub s), the code error rate of the demodulated signal is detected by a code error detecting circuit 100. When the initial value is varied by the signal E(sub s) and the amplitude distortion is generated by the equalizer 3, the amplitude distortion due to the multipath fading is compensated by the automatic equalizer, and the amplitude distortion amount of the system includes only deviation in initial set value, so that a test is accurately performed.